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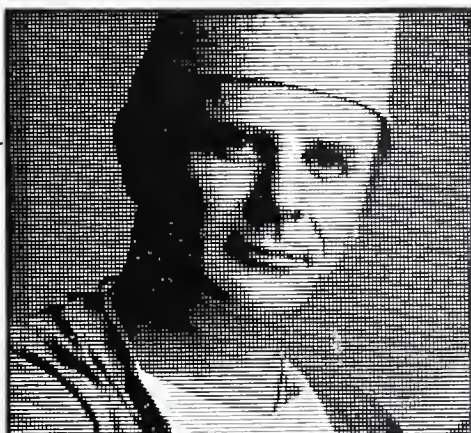
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Pregnancy: Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

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DOSAGE AND ADMINISTRATION

The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

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While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

HOW SUPPLIED

CARAFATE (sucralfate) 1-gm pink tablets are supplied in bottles of 100 and in Unit Dose Identification Packs of 100. The tablets are embossed with MARION/1712. Issued 3/84.

References:

1. U.S. Department of Health, Education, and Welfare, Office of the Surgeon General, *Smoking and Health: A Report of the Surgeon General*. Rockville, MD, U.S. Department of Health, Education, and Welfare, Public Health Service, 1979.
2. Richardson CT. Pathogenetic factors in peptic ulcer disease. *Am J Med* 79 (suppl 2C): 1-7, 1985.
3. Brandstaetter G, Kratochvil P. Comparison of two sucralfate dosages (2 g twice a day versus 1 g four times a day) in duodenal ulcer healing. *Am J Med* 79 (suppl 2C): 36-38, 1985.



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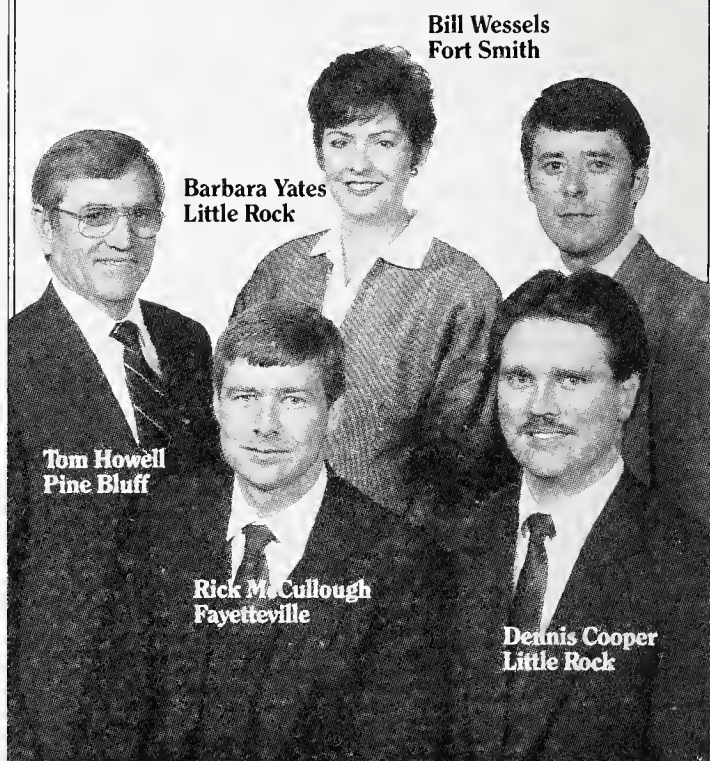
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PROCEEDINGS
111th ANNUAL SESSION
OF THE
ARKANSAS MEDICAL SOCIETY
FAYETTEVILLE, ARKANSAS
APRIL 23 - 26, 1987



*W. Ray Jouett, M.D.
Little Rock
President
Arkansas Medical Society
1987-1988*

Dr. Jouett's photos by Greer Lile, Little Rock.

INAUGURAL ADDRESS

W. Ray Jouett, M.D.

There continues to be a torrent of material coming from Congress, editors, economists, businessmen, all using the same terms (trying to get a handle on health care). All are concerned that the problem can be solved by passing laws developing HMOs and many other forms of bureaucracy with the resultant harassment of the physician. We continue to hear more about the DRGs for the physician as well as the hospital and finally the catastrophic health care plan which appears to be greatly blessed also in Washington.

Several years ago when socialized medicine was being considered we had philosophical discussions about free enterprise. Is this good for the patient? Is it good for the country as a whole? We hear little about that now. We only hear cost.

We need to keep in mind that estimated costs of anything that comes from the government, be it an aircraft carrier, bomber, or the proposed catastrophic health insurance; historically everything has been on the low side and I think that we will have to assume that that will be the case with the catastrophic health care program that is presently being formulated.

Now we are encumbered with a variety of new programs to interfere with the doctor/patient relationship. Because of Congress, business and other special interest groups, we have the PRSO, the Arkansas Foundation for Medical Care, HMO and other such entities that are beginning to mushroom, all with the desire to stretch the dollar. We have boards and other agencies that try to second guess how health care was delivered and Congress is gradually applying the heavy hand to the delivery of this health care and one continually gets the impression that what we are really talking about is rationing of health care. With this delivery of health care, we see or hear of no responsibility being assumed by the recipient. Does not the recipient have some responsibility to utilize knowledge that is available to him to try to insure his good health? Can the physician best serve his patient and various agencies with which he must now work at the same time? These are difficult questions that deserve answers.

This is a broad overview of many troubled problems, but for the next few minutes I would like for us to look at some specific problems that I think are outstanding in our state and things that we have a chance to work toward improving. Obviously all of the many problems referable to health care and its delivery cannot be looked at. We will not look at bureaucratic influence. We will not look at the rising cost of malpractice insurance. We will not look at available information referable to catastrophic health insurance. We will also not look at the ever growing problem of teenage pregnancies within our state.

Many of the things that have been mentioned are being wrestled with at the national level of medicine. We have our input and we must continue with that input, but we must also realize that this is not a problem for the AMA, nor the Arkansas Medical Society, but is a problem that each physician of the state has and improvement in our problems and solutions are only going to come when we have total involvement of our physicians as they take it upon themselves to become knowledgeable of our problems.

EDUCATION

Education is a transcendently interesting theme. Its merits, its claims, its achievements, its enjoyment, its honors, and its rewards are not something that can be told in a few minutes. Education is more than mere science, art, literature, philosophy, or theology. It is the perfect development and decoration of man. It enthrones reason and conscience within us and as a result education develops an enlightened conscience. The richest mine in the community is the mind and it is that we must strive to reach. With consideration of this lofty theme, a practical and interesting question arises. How is this to be prosecuted and perfected?

The preamble of the Constitution and Bylaws of the Arkansas Medical Society Article 2, proposes seven purposes of the Society. The one that is challenging us is number six. "To enlighten and direct public opinion in regard to the great problems of state medicine so that the profession shall become more capable and honorable within itself, and more useful to the public in

prevention and cure of disease, and in prolonging and adding comfort to life." If we accept our responsibilities we have been given an awesome challenge.

THREE ENDEAVORS ONE GOAL AIDS

We have a new disease among us and we are a small state, and there are those that think we are reasonably isolated from this problem. Everyone in this audience is intelligent enough to know that this is not true and that this problem is not going to disappear, and it is not going to bypass Arkansas. We presently have fifty-one reported cases in this state and the question that arises is that if fifty-one cases have been reported, how many are still out there not reported?

The problem is going to intensify and by the end of the century, we are told that some 2 million people will be involved in some way with AIDS and many of these are going to be our young people.

The Centers for Disease Control estimates that 1.5 to 3 million people in the United States are now infected with the virus and also, information leads us to believe that thirty to fifty percent of these will develop the AIDS syndrome within five years.

Statistics also are being developed that relate to us that by 1991, two hundred-thousand will require hospitalization, and health care costs will be from 8 to 16 billion dollars just to handle this disease alone. Another staggering statistic is that by 1991, 54,000 people will die of this disease. We are not talking about a great span of time, we are talking four years. It is projected that one million will develop the disease by the year 2000.

We obviously have not as a nation yet begun to realize the awesome problem that we have before us, and I think that here is an opportunity for the Arkansas Medical Society to become involved in doing everything that is known to be done at this point to try to contain and control this growing epidemic in our state.

There are several agencies at the present time that work in the state attempting to wrestle with this problem. Certainly we, of the Medical Society, do not need to duplicate or reinvent the wheel with our involvement, but we do need to be innovative and we need to be in a supporting posture. If appropriate programs are not developed, we need to take the lead, develop them and proceed.

Legislation, in my opinion, is going to have to be involved in this matter. As you know, a bill was introduced in the legislature for AIDS testing before a marriage license can be obtained. It was inappropriately referred to a committee for study. It would appear now that this is going to come from the national level.

It would also seem to me that all of this concern that we read about referable to civil rights is going to have to be abandoned if this problem is going to be brought under control. If there was a band of terrorists in the city of Little Rock tonight and a SWAT team was out to remove them, there would be someone obviously complaining bitterly about their civil rights.

An adhoc committee has been formed to work with this problem to give advice to the Medical Society concerning how we can best become involved in this problem and how we can best be a part of the education process in this state. It will have to be controlled or contained by education. We cannot fight the entity with a discussion of morality. Man does not create disease anymore than disease writes history.

SUBSTANCE ABUSE

This is a most distressing problem as we see it involving our young people. It is also like the AIDS problem; it is not going to disappear in the near future. It is going to continue and it is probably going to intensify. It is so distressing to visit the emergency room day after day and see the young, healthy people whose lives have been either violated or snuffed out because of drugs. The answer that we flippantly give is, "If they didn't take the drugs, they wouldn't have the problem to begin with." That of course offers no solution. We have a problem and we need to work toward a solution.

To educate and to help in this endeavor is going to require money. We are going to have to dig into our pockets and become financially involved to accomplish the things that are needed in this aspect. We are going to have to look about and try to obtain funds from foundations and other agencies and develop a program. This is something I would like very much to see our Society push forward with in the field of education.

The American Association of Neurological Surgeons and the Congress of Neurological Surgery are working on a similar problem of trying to educate young people to the danger of a broken neck from diving into shallow water. Each year, about 10,000

persons in the United States sustain spinal cord injuries and another 422,000 sustain head injuries. Approximately 50% of all head and spinal injuries are caused by motor vehicle accidents, and we are also told that approximately 50% of all automobile accidents are in some manner drug related.

This combined effort of neurological surgery has consisted of a program that takes the quadriplegic or the paraplegic to the assemblies of high schools and an assessment of the problem is given. The students hear from the victim the results of their indiscretion. They are allowed to talk with them, question them and to visit with them. This is far more effective than any lecture that any of us could give to a high school assembly as they will be influenced by their peers much more so than they will an adult.

This same format can be developed and I think that this should be given high priority by the Medical Society which means that we are going to have to become involved. We are going to have to work to develop this type of program and we may even need to work with programs that are already in progress with this disastrous problem. But this can be done and I think will be helpful in saving lives of a lot of young people.

Substance abuse is not limited to young people. We also find that this is a problem that is occurring with more frequency within the medical profession. The Arkansas Medical Society has developed an Impaired Physician's Committee and at the present time, this committee has not been aggressively active. Statistics reveal that approximately 15% of all physicians will become impaired at some point with either alcohol or other drugs. This is a staggering and a sobering pronouncement.

This committee is working independently of the Arkansas State Medical Board. There obviously are a lot of physicians who do not need to be brought before the Arkansas State Medical Board, but they are borderline or they are beginning to get into trouble. These are the people that the Impaired Physician's Committee would strive to salvage. Once this committee feels that the patient cannot be salvaged by their intervention, that person will be reported to the State Medical Board. You may rest assured that if that person is reported to the Board and the physician is indeed impaired, appropriate action will be taken. This committee is very vital to our state. It needs our help and we must also educate the physicians of this state of its existence, of its willingness to work and its importance.

LEGISLATION

Abraham Lincoln very discretely stated, the problem referable to the Union when he made the statement, "If we do not hang together, we shall certainly hang separately". This statement is now very true when we consider the plight of medicine.

For too long in medicine we have had a great host of takers and very few givers. We have all heard various reasons why the physician explains his uninvolvedness in political problems referable to medicine, but in my opinion, uninvolvedness has done nothing to increase the respectability of the American public toward the physician. A 1984 AMA survey showed that 54% of the people interviewed said that the physician does not care about people as much as he used to, 67% said that physicians are only interested in making money, 68% said people are losing faith in physicians and only 27% thought that physician fees were reasonable.

It would seem that this is an opportune time to become involved in trying to change that image. Granted these statistics are some three years old, but I would doubt that we fare any better, and perhaps not as well as when the survey was taken in 1984.

The problems are most evident as we have just finished a legislative session. We have all watched the problem of the optometry bill which has been a topic since almost the first day of the Legislature, and certainly we are all aware of the impending ramifications of that bill. Fortunately, the bill was not passed as originally presented, but nevertheless damage has occurred to the delivery of health care to the citizens of the state of Arkansas. We have all been privileged to witness the legislation of the ability to practice medicine.

We must become involved in educating the people of this state concerning our growing problems. The Arkansas Medical Society as an organized unit can only do so much. The majority of this is going to have to be done on a one to one basis. Most all patients, if given the opportunity, will discuss legislative aspects of things that are troubling physicians. They will listen to what we have to say. They certainly may not agree with everything that is said, but they will listen and that is the way we are going to have to turn public opinion around about things that are so distressing to the practice of medicine that is coming from our legislature. Listen to what Cato the elder had to say, "Some have said that it is not the business of private men to meddle with government, a bold and dishonest saying, which is fit to come from no mouth but that of a tyrant or a slave. To say that private men have nothing to do with government is to say that private men have nothing to do with their own happiness or their misery;

that people ought not to concern themselves whether they be naked or clothed, fed or starved, deceived or instructed, protected or destroyed."

The special interest groups that accomplish things in the legislature do that by giving attention to the members of the legislative body. Whether we like it or not, we are going to have to place ourselves in the trenches and we are going to have to take a position and fight.

All you have to do is find out how well you are liked and respected by your Legislator is to spend some time with him and specifically speak with him about your problems. He will very candidly tell you why he dislikes physicians. Our response in the past so often with the Legislature has been that of a defensive and angry posture. We are all well aware of the fact that whom the gods would destroy, they first make angry. We are going to have to cultivate our legislators. We are going to have to develop our credibility and we are going to have to spend some money on their campaigns. There are two things that legislators appreciate. One is contributions to their campaigns, and the other is the fact that you are credible. If the latter is lost, we may never regain that.

Over the next few years, I see our greatest problems arising, not only at the national level, but at the state level in our law making bodies. Old battles are going to have to be refought and new ones are going to come on the horizon. We need constantly to keep in mind that the legislators respond to the people.

Alexander Solzhenitsyn described our plight so well in his commencement address delivered at Harvard University on June 8, 1978, "Western civilization has chosen for itself the organization best suited to its purposes and one I might call legalistic. The limits of human rights and rightness are determined by a system of laws. Such limits are very broad. People in the west have acquired considerable skill in using, interpreting and manipulating laws, though laws tend to be too complicated for an average person to understand without the help of an expert. Every conflict is solved according to the letter of the law and this is considered to be the ultimate solution. If one is right from a legal point of view, nothing more is required, nobody may mention that one could still not be entirely right and urge self restraint or renunciation of those rights, call for sacrifice and selfish risk, this would simply sound absurd. Voluntary self restraint is almost unheard of, everybody strives toward further expansion to the extreme limits of the legal frame."

SOLUTIONS

If we are to survive and if we are going to face our problems effectively, this will need to be done as a unit. We also need the involvement of every physician in the state. There are a number of physicians presently in this state who are not members of the Arkansas Medical Society and who are not members of the American Medical Association and all for various reasons. These problems are so great that we cannot endure unless we become united.

The Arkansas Medical Society has had its internal problems, but these are behind us at the present time. The active participating physicians of the Arkansas Medical Society are united and all striving and working for the same goal. We need to have total involvement not only from the membership, but also with financial help and any other forms of involvement.

We are a small state with some 3,500 physicians. We need some positive direction. We need some goals to strive for. We need a plan of action for things that are coming and for this reason, we need to have a Long Range Planning Committee. I plan to appoint this committee and certainly its charge is awesome. We have too long been on the defensive - to be assertive and aggressive we need long range plans and goals. Professional help must be received as a part of the long range plans.

One of the things that I have observed about the physician through the years is the development of his personality. Years of rigorous training and years of decision making has made him, to a large degree, an obstinate character. He noticeably becomes more obstinate when he feels that he is being pushed into a situation or when he feels that something is being done without his knowledge or participation. When this happens, he becomes one of the most obstreperous creatures that one can imagine and he will do one of two things. He will dig his heels in and fight with every ounce of energy or he will withdraw. This is what has happened to us here. A number of people did not stand and fight, but have withdrawn. We need desperately to again have these people back as viable, active members of the Society and also of the American Medical Association. The Society needs your thoughts, needs your input. Every physician is important and we can no longer afford to have a dichotomy. I do not agree with all the things that the American Medical Association has done in the past or perhaps all the things that it plans in the future or even all the things that it is doing presently, but I am amazed at the positive material that is coming out of the AMA. The AMA is involved in litigation at the national level. The AMA is involved in Congress and many other things of which we are all aware.

However, I think that any negative thought that we have referable to the AMA is far outweighed by the positive aspects and goals that are presently being strived for by this association, and I wholeheartedly support and believe that every physician should support the American Medical Association. This is the only effective voice that we have at the present time at the national level.

RESPONSE OF THE PHYSICIAN

Whatever the outcome of all the various things that are striking at medicine at the present time, we need to continue to practice medicine at the very highest level that is available to us and to every keep in mind that we are a member of a noble profession.

Medicine at the present time has developed and is functioning at a level never before known. Presently we can impale a neuron. We can visualize all the cavities of the body without means of radiation. The average life expectancy at the present time is seventh-four years: seventy-one for males and seventy-eight for females. Malignancies are being cured that were not even curable ten years ago.

We have all seen disease removed from our society. Small pox is no longer present on the earth. Polio has been virtually removed. Multiple diseases have disappeared that once ravaged childhood as well as the elderly.

We cannot allow anything to come about that is going to cause a decline in the development of our profession. We need to remember that medicine is like civilization, it is a tough plant and its roots spread all over the earth. It is true that some of the roots are more developed than others, but nevertheless they are all a part of this great plant, and it is also true that there are things that are striking at the tendrils of this plant, but they are not going to kill it. It is going to continue to grow, it is going to thrive, but it is going to require continued vigilance on our part.

A few years ago I thought I was glad I was not starting medicine all over again as a young practitioner, thinking about how much grief the young physician is going to face in his delivery of health care. I now believe that I was wrong about that. I think the greatest and the most exciting period of medicine is just beginning and that the next two decades will bring improvements for the health care profession which cannot be even contemplated today. The problem of how it is going to be delivered, however, still is going to be one of our constant struggles. I believe that the American people, if informed, will be very concerned about the continued development and continued delivery of health care. The exciting time is yet to come, but we must work diligently to see that it is not burdened with bureaucracy.

The poet A.E. Housman expressed it best, "To stand up straight and treat the turning mill; to lie flat and know nothing and be still; are two trades of man and which is worse I know not, but I know that both are ill."

PROCEEDINGS
111th ANNUAL SESSION
OF THE
ARKANSAS MEDICAL SOCIETY
FAYETTEVILLE, ARKANSAS
APRIL 23 - 26, 1987

FIRST SESSION
HOUSE OF DELEGATES
Thursday, April 23, 1987

Speaker of the House, Amail Chudy, called the House of Delegates to order at 1:00 p.m. on Thursday, April 23, 1987, at the 111th meeting of the Arkansas Medical Society. He called upon Frank Morgan to give the invocation.

Members of the Society seated as delegates and officers were: BAXTER, Robert Baker, John Guenthner; BOONE, Mahlon Maris; CARROLL, Oliver Wallace; CHICOT, Wrede Vogel; CRAIGHEAD-POINSETT, Robert Frey, Douglas L. Maglothin, Joe H. Stallings, Jr., Don B. Vollman, Jr.; CRAWFORD, Millard Edds; CRITTENDEN, H. Wade Westbrook; DESHA, Howard R. Harris; FAULKNER, J.J. Magie, FRANKLIN, David Gibbons; GARLAND, Brenda Powell; GREENE-CLAY, Richard Martin; HEMPSTEAD, Jim McKenzie; LAWRENCE, Ralph F. Joseph; LEE, Dwight Gray; LOGAN, Sanford Hutson; LONOKE, Jerry Chapman; MILLER, Paul Meredith; MISSISSIPPI, Eldon Fairley; MONROE, Neylon C. David; PHILLIPS, Robert D. Miller, Jr., L. J. Pat Bell; POLK, David D. Fried; POPE, James Burgess; PULASKI, Robert Shannon, Kelsy Caplinger, Charles Rodgers, Fred Henker, Robert Valentine, Alan Storeygard, Gilbert Dean, Harold Hutson, Coburn Howell, Edwin Hankins, III, George Mitchell; SALINE, Marvin Kirk; SEBASTIAN, A.C. Bradford; TRI-COUNTY, Michael Moody; VAN BUREN, John A. Hall; WASHINGTON, Mitch Singleton, Liz Rantz, David Rogers; YELL, James L. Maupin; COUNCILORS, Merrill Osborne, J. Larry Lawson, Jim E. Lytle, John E. Bell, John Hestir, Lloyd G. Langston, Paul A. Wallick, James D. Armstrong, Ronald Bracken, Paul Cornell, Frank E. Morgan, Harold Purdy, Warren Douglas, Charles Logan, Robert H. Langston, Morton C. Wilson, and Pat Phillips. PRESIDENT-ELECT, W. Ray Jouett; FIRST VICE PRESIDENT, James Gardner; SECRETARY, James R. Weber; IMMEDI-

ATE PAST PRESIDENT, John P. Burge; SPEAKER OF THE HOUSE OF DELEGATES, Amail Chudy; VICE-SPEAKER OF THE HOUSE OF DELEGATES, Sybil Hart; TREASURER, James Kolb; PAST PRESIDENTS, A.E. Andrews, Payton Kolb, C.C. Long, Ben Saltzman, T.E. Townsend, Ross Fowler, Stanley Applegate, Morriss Henry, and Purcell Smith; and RESIDENT SECTION, Todd Holt.

Speaker Chudy introduced the President of the Arkansas Medical Society Auxiliary, Mrs. Robert Valentine.

AUXILIARY PRESIDENT'S ADDRESS
Mrs. Robert Valentine

It is a pleasure for me to bring you greetings from the American and Arkansas Medical Society Auxiliarians. I especially want to thank you for inviting me. As most presidents will tell you each year, we have had a good year. We have increased our membership. We didn't reach the 1,000 goal but we almost did, and we certainly increased it more than we did last year. We raised more money this year throughout the state in various scholarships and various community activities. We had as many community activities throughout the state as there were colors in Joseph's coat, and they were all successful.

We raised around \$14,000 in AMA-ERF and for our medical schools, which almost doubled what we did last year. As you well know, we had our eyes opened during the legislative session. On Legislative Day, the Auxiliarians had over sixty physicians/spouses to attend, which is the greatest number ever had, and it was a huge success thanks to Margaret Kolb. Many of us were there many, many days, especially on the days that you asked us to be there. We wrote letters; we sent telegrams and we know that we have got to get more involved. We are so desperately trying to support you in this area, not only on the state level, but nationally, too. We know we need some training in this area. We need some pep rallies and recognize the fact that we are going to have to spend more of our volunteer hours in this area.

Last June, eight people attended the national convention, and hopefully we will have as many go this year. We had

six people to attend the leadership conference last September and again this last February. You helped us to do this. We appreciate your financial support and your emotional support, and we deeply appreciate the confidence and trust you place in us.

We promise to continue to put our best foot forward and to support all of your endeavors. My wish for you is to have a good session. From what I have seen, it looks like it will be a great one.

Speaker Chudy recognized Mrs. James Gardner, President-elect of the AMS Auxiliary.

AUXILIARY PRESIDENT-ELECT'S ADDRESS

Mrs. James Gardner

As President-elect and Membership Chairman of the Arkansas Medical Society Auxiliary, it is a pleasure to bring you greetings from 924 Arkansas Medical Auxiliary Members. Our membership is up this year, and I do hope that your spouse is an active, paid member of our organization. You see, I am convinced that physicians select and marry intelligent spouses. I would like to propose to you that active membership in the Auxiliary will provide means for your spouse to use her many talents while furthering the goals of medicine in Arkansas.

Now, I would like to see all of us work together to help maintain the dignity of the medical profession, and to promote a quality care, which requires the art as well as science in practicing medicine. Now, it is time in Arkansas for us to work in our respective communities for better public relations, better legislation and better health education.

Speaker Chudy introduced Mrs. Albert J. Strauss, Jr., Recording Secretary, American Medical Association Auxiliary.

AUXILIARY RECORDING SECRETARY'S ADDRESS

Mrs. Albert J. Strauss, Jr.

I thank you for this opportunity to greet you on the behalf of almost 80,000 members of the American Medical Association Auxiliary. I'm pleased to bring you two messages today. First, that the medical auxiliary members in this state and across the nation share your concern about medicine's changing environment. And second, that they are working cooperatively with their Medical Association to turn those changes to advantages that will benefit not only medicine but the patients you serve.

We will realize that the multi-faceted issues facing physicians today mean that more than just one member of that family be involved; that it must be a team effort if we are to continue the high quality care that we have come to expect. And this is why we work hard to see that our members are informed and knowledgeable. This is why we urge them to become involved in cooperative efforts in their association, particularly in the legislative and public arenas.

Across the country, our members are working in such programs as legislative phone bank that the AMA asked us to become involved in, and in the legislative alert program, in the key contact program. These are programs which have helped to bring sound medical legislation that benefits the profession and the patients alike.

Our members are also working hard in projects that mean better community health nationwide. They are projects that provide proof that physicians as individuals genuinely care about their patients. They care about the patient's health and welfare, and about the community in which those physicians live.

AMA Auxiliary members take great pride in the fact that our organization is the one with and for the medical profession. We take great pride that it is our organization that can join with you in your efforts to impact today's challenges. We take great pride in the fact that we will help you change the environment. We will continue to seek quality health care that can be affordable and available to all.

We thank you for your support and for your cooperative efforts with your own Auxiliary. We applaud the positive contributions and the impact that these efforts have made here in Arkansas and across the nation.

We look forward to continued efforts. Efforts in which the winning combination of the Medical Society and the Medical Auxiliary produce positive actions and tangible results of all that we seek to serve. For just as we know there are challenges facing us today, we know there are no guarantees for the future, but there are opportunities. If we can seize this together, we can help to assure a bright future for medicine and for all who benefit from the quality care we have come to expect.

Speaker Chudy called upon T.E. Townsend who introduced Alan E. Nelson, Chairman of the Board of Trustees of the American Medical Association. Dr. Nelson's address is printed elsewhere in this issue.

Speaker Chudy asked that Mrs. Robert Valentine, Mrs. David Williams, AMS Auxiliary AMA-ERF Chairman; Charles Wilkins and I. Dodd Wilson, Dean of the University of Arkansas College of Medical Sciences to come to the podium. Speaker Chudy presented two checks to I. Dodd Wilson on behalf of the American Medical Association Education and Research Foundation. One check for \$8,514.90 is intended for the pursuit of excellence in the Medical School's program was given for unrestricted use. Another check, in the amount of \$6,231.60 and restricted to the school's program for financial assistance to medical students, was also given to Dr. Wilson.

Speaker Chudy reported that 81 delegates were in attendance.

Upon a motion from Fred Henker, the House adopted minutes of the 100th Annual Session as published in the June 1986 issue of the Journal of the Arkansas Medical Society.



Speaker of the House, Amail Chudy, M.D.



Sybil Hart, M.D., Vice Speaker of the House.



President-elect, John M. Hestir; Secretary, James Weber; President W. Ray Jouett, and J. Larry Lawson, Chairman of the Council.



President-elect, Dr. John M. Hestir.



Officers and Council Members

Seated, left to right: James M. Kolb, Jr., James Weber, W. Ray Jouett, John M. Hestir, R. Wendell Ross, J. Larry Lawson, Charles Logan, Sybil Hart. Standing, left to right: Paul Wallick, Jim Lytle, Merrill Osborne, Warren Douglas, George Warren, Paul Cornell, Harold Purdy, Morton Wilson, Hoy Speer, Amail Chudy, Ronald Bracken, Frank Morgan, William Jones, Robert Langston, Richard Pearson and Lloyd Langston.

Photos by Mike Sloate

Upon a motion from Charles Logan, the House adopted minutes of the House of Delegates session held on November 23, 1986, as published in the January 1987 issue of the Journal of the Arkansas Medical Society.

Speaker Chudy called upon James Weber to give a supplemental report of the Committee on Medical Legislation. He commended the work of Ken LaMastus, Executive Vice President of the Arkansas Medical Society; Mike Mitchell, AMS General Counsel and several physicians, Charles Rodgers, William Jones, and Payton and Margaret Kolb to name a few, who put in a great deal of time working during the past legislature session. Dr. Weber termed this session as "The session that woke the sleeping giant of power, the physicians of Arkansas, to the legislative process." Dr. Weber reported that the 1760 bills were introduced during the past session, 47% of those bills will become law and that more than 70 of those bills introduced pertained to health care.

Dr. Weber praised the physicians from Jefferson County for the way they organized themselves both politically and financially. He stressed that the entire state needs also to become more organized in order to be more legislative effective. The true power comes from back home at the grass roots level which is where we need to begin.

Vice Speaker Hart read the final reading of the Constitutional revision voted on at the 1986 House of Delegates. This revision had a printing error in the March 1987 Journal of the AMS, but was distributed to the Delegates in correct form prior to the meetings. The following changes in the Society Constitution and By-laws were approved by the House of Delegates on the first reading in April 1986 and the second reading in April 1987:

1. Article IX. Officers

Delete the word "twenty" specifying the number of councilors and add "immediate past president" as an officer. The section would then read: "The officers of this Society shall be a president, president-elect, three vice presidents, Speaker of the House of Delegates, Vice Speaker of the House of Delegates, a secretary, a treasurer, an immediate past president, and councilors. Their qualifications and terms of office shall be as provided in these Bylaws."

2. Chapter V. Election of Officers

Delete the words "each year ten" in Section 6 so that it will read: "Councilors shall be elected to serve a two-year term; all other terms of office are for one year. All officers shall serve until their successors are installed."

3. Chapter VI. Duties of Officers

Delete the second sentence of Section 8, which reads "the two councilors in each district shall be designated 'senior' and 'junior' on the basis of length of tenure" and substitute "the

one in each district with the longest tenure shall be considered the senior councilor".

The revised section would then read: "Each councilor shall be organizer, peace maker, and censor for his district. The one in each district with the longest tenure shall be considered the senior councilor."

The Committee was requested by the Council of the Society to present proposals regarding component society representation on the Council and in the House of Delegates. The Committee offers the following recommendations:

4. Chapter I. Membership. Section 2. Membership Classifications.

(B) Life Membership

Delete "an active member who" and substitute "a physician who has been an active member of this Society for a period of ten years and who", so that the section would read:

"A physician who has been an active member of this Society for a period of ten years and who has continuously been a member of organized medicine and has either (1) attained age seventy or (2) practiced forty-five years shall be eligible for life membership and, upon the recommendation of his component society, shall be granted such status by the House of Delegates. Life Members shall have the right to vote, hold office, and all other privileges of membership in this Society.

5. Chapter I, Membership. Section 2. Membership Classifications.

(c) Emeritus Membership

Delete "an active member who" and substitute "a physician who has been an active member of this Society for a period of ten years and who"; delete the word "not" in the last sentence.

The section as revised would read:

"A physician who has been an active member of this Society for a period of ten years and who has continuously been a member of organized medicine for less than forty-five years and who has fully retired from the practice of medicine shall be eligible for Emeritus Membership. Such membership shall be granted by the House of Delegates upon the recommendation of the member's component society. Emeritus members shall have the right to vote, hold office, and all other privileges of membership in this Society."

6. Chapter IV. House of Delegates. Section 6. Representation of Component Societies

Add the following as (A)(1) of Section 6:

"Representation for the House of Delegates shall be based upon the number of active members, life members, emeritus members, and associate members as of December 31 of the year preceding the annual meeting.

Renumber the present (A)(1) as (A)(2) of Section 6 and add the words underscored:

"Each regular county society shall be entitled to send to the House of Delegates each year one delegate for every twenty-five Arkansas Medical Society members as specified in (A) (1), and one for each major fraction thereof, provided that its annual report and assessment are in the hands of the executive vice president by March first of each year. Each county society, however, regardless of its number of members, which has complied with this section, shall be entitled to one delegate."

7. Article VI. Council.

Add the following as a new Section 3:

Section 3. Representation

"Representation on the Council shall be based upon the enumeration of members in each councilor district in accordance with provisions of these Bylaws for representation in the House of Delegates".

Renumber the present Section 3 (Executive Committee) as Section 4.

T.E. Townsend asked for clarification of what position the AMA Delegates represent. He indicated that the AMA Delegates are listed among the slate of officers of the AMS, but are not addressed in the Constitution and By-laws except to say they are elected. Vice Speaker Hart asked Dr. Townsend if his question of the AMA Delegate position could be referred to the Constitution and By-laws Revision Committee for further research. Dr. Townsend agreed.

Speaker Chudy reported that a resolution from Baxter County pertaining to the Arkansas Foundation for Medical Care was received after the printing of the March issue of the Journal of the Arkansas Medical Society but twenty days prior to the House of Delegates. This resolution, which was distributed at the door of the House, was assigned by Speaker Chudy to Reference Committee #2. (Resolution printed in full in Reference Committee #2 report.)

Speaker Chudy asked to address the House: "I would like to take a moment to stand to a point of personal privilege, something I have never done in the nineteen years before the House of Delegates. I want to share some thoughts that I shared when I addressed the House of Delegates of the American Academy of Family Physicians in Washington when I received my honors (Amail Chudy was named Physician of the Year by the American Academy of Family Physicians). I had spent a couple of sleepless nights after receiving my notification in the mail and begin to write down several thoughts that kept going through my mind. One thought that I wrote most often was about samples. We all get samples in our office and most of us think they are a burden, there are two here and three there

and seemingly there is very little we can do with these things. Personally, I think that samples are something we all have personally and unless we give them to people, then no one knows we have them. I think the samples we have are: availability, empathy, love, patience and knowledge.

I took the membership of 59,000 (AAFP) and said that if each of us touched twenty-five people a day, we would come up with some 1.4 million people we have touched in a day's time to give our opinion on what is happening to us. I ask that each of you think about the same thing. I know we are all busy and have busy schedules, but it would take only a moment to tell others, that we touch, how we feel about the things going on around us and in Washington."

Speaker Chudy recognized Asa Crow who asked to address the House. Dr. Crow said he wanted to discuss money and politics. He indicated that we as a society have to get involved "to save ourselves." We need a full time governmental affairs person in our society to work on both state and national legislation. He indicated that we could raise our dues to pay for this person, but could not raise our dues to donate to political campaigns. He urged our incoming president to appoint a long range planning committee to work with such a person on both the state and national level which would move our society forward.

Speaker Chudy recognized Bob Shannon who presented a resolution from the floor pertaining to the funding of the Arkansas State Hospital. This resolution is as follows:

**RESOLUTION ON FUNDING OF THE ARKANSAS
STATE HOSPITAL**

WHEREAS, the Arkansas State Hospital has, in recent years, been an outstanding institution for delivering mental health care, and

WHEREAS, a strong and vibrant Arkansas State Hospital is vitally important in the provision of mental health care for the citizens of Arkansas, and

WHEREAS, the Arkansas Medical Society has long supported a strong mental health service including a high quality Arkansas State Hospital, and

WHEREAS, due to economic as well as other problems, the Arkansas State Hospital is currently near crisis, and

WHEREAS, immediate action is needed to provide the funds and other support necessary to maintain and/or reestablish a high quality Arkansas State Hospital, be it therefore

RESOLVED, that the Arkansas Medical Society call upon the Governor and the Arkansas General Assembly to take whatever steps it deems necessary to maintain and/or reestablish high quality care at the Arkansas State Hospital.

Upon a motion from William Jones and seconded by Frank Morgan, the resolution was approved for consideration by the House of Delegates.

Speaker Chudy assigned this resolution to Reference Committee #1.

Speaker Chudy announced the vacancies on the Arkansas State Board of Health in Congressional Districts #3 and #6. He asked for a brief recess and for delegates from those two districts to meet and nominate three names to submit for the Governor's consideration. Those presently serving, Ken Lilly and Howard Harris, are both eligible for reappointment.

He also asked that the nominating committee meet to nominate a Member-at-Large for the Arkansas State Board of Health. This committee is also asked to submit three names

which will also be submitted to the Governor for his selection.

Speaker Chudy reported that the new members of the Nominating Committee for 1987-88 in the odd numbered districts are as follows: District #1, Richard Martin; District #3, Robert Miller; District #5, Ray Bowman, District #7, Brenda Powell, District #9, Robert Langston.

The individual Congressional Districts met for a brief time and the House of Delegates adjourned until 11:15 a.m., Sunday, April 26, 1987.

ADDRESS

by

ALAN NELSON, M.D.

Chairman, Board of Trustees
American Medical Association
Fayetteville, Arkansas

It seems as though the whole world is telling us what's wrong with American Medicine.

Congressman Pete Stark called us "troglodytes" and said we are "to the right of Genghis Khan." A chairman of the Senate Finance Committee said, even if a few years ago, "you people have a big problem. We don't mind it if you make a half million dollars income on your labs, but for one doctor to make two or three million dollars a year from cataract surgery alone is making people mad."

The Massachusetts legislature had decided that it must require universal acceptance of assignment as a condition for physician licensure in order to assure that medically needy Medicare patients will receive affordable care.

Gregg Easterbrook, in a special report for *Newsweek* magazine, quotes residents at the hospital of the University of Pennsylvania referring to patients as "hits" and "hurt mes" and describes the training process as "dehumanizing" and "deep-frying in the young doctor's brain."

We are accused of participating in a conspiracy of silence that protects bad doctors. So-called consumer advocates continually press to have peer review findings released publicly and imply that a "consumer reports" of hospital and physician quality is feasible. They tantalize the public with the idea of grading physician competence on a scale of 1-5 or A-E. I have been asked in interviews, as recently as yesterday, if it is true that 25,000 impaired physicians are practicing in the U.S. and why state licensing authorities discipline so few. The inspector general is sending PROs on search and destroy missions, publishing sanction notifications in local newspapers before the sanctioned physician is afforded due process.

Plaintiffs' attorneys say that PLI premium problem is a rip-off by the insurance industry and that the reason for a malpractice crisis is malpractice.

In a 1987 poll, thirty-seven percent of patients disagreed with the statement "most doctors take a genuine interest in the patients."

Only sixty-one percent agreed that doctors are usually up-to-date on the latest advances (down from seventy-three percent in 1985.)

Only forty-five percent thought doctors usually explain things well.

Only thirty-six thought we spent enough time with our patients. (But up from thirty-four percent in 1984)

Fifty-six percent thought we were too interested in making money. (But down from sixty-seven percent in 1984)

Sixty-nine percent think we keep them waiting too long. (But down from seventy-eight percent in 1985)

A series of newspaper articles in Rochester, New York, painted horror stories of DPT vaccine injury and suggested that routine immunization was a sinister and malevolent practice that resulted from medicine's insensitivity and ignorance.

Even the profession seems to be down on itself. Let me quote from the April 10, 1987 *Wall Street Journal*, "Alan Zelicoff, an internist in Albuquerque, New Mexico, spends much of his 75-hour work week fighting with bureaucrats and administrators. He has been practicing five years but still has about \$100,000 in medical school loans and related debts to repay. He is miserable and depressed."

"I feel deceived," said the 33-year-old doctor. "If someone had told me that this is what it would be like, I never would have done it."

Roberta Berrien, 42, a physician in Northampton, Massachusetts, still believes in making house calls. But she often gets yelled at by patients. "I'm standing on my head for them, but I don't feel appreciated," she says."

"She won't put up with it much longer; she has just accepted a job effective in July as head of a university health service."

And Joseph D. Wasserug, M.D., a retired internist from Quincy, Massachusetts, wrote in the April 10, 1987 issue of *AMNEWS*, "the satisfactions that one allegedly derives from the ethical and compassionate practice of medicine are easily achieved in other business and professional enterprises with less emotional and financial costs than medicine. A lawyer friend of mine reminds me frequently that he is much richer than I - and for good reason. He says he takes care of a person's important matters - his *money* and his *business* - while I, a physician, concern myself with the trivialities of existence - a person's life and health."

And there is no question that we have problems. We must solve the professional liability crisis before it destroys the patient-physician relationship, which has traditionally been based on caring and trust and which is being replaced by suspicion and fear - and before it drives more and more of us from practice.

And we must remember our commitment to our profes-

sionalism, with its three essential elements: 1) commitment to rigorous and continuous education, 2) willingness to engage in critical self-analysis through peer review, to assure the quality of service we provide and 3) a commitment to place the welfare of the patient above our own financial self-interest, in an era of increasing competition and increasing potential for conflict of interest.

But I am *not* going to tell you what is wrong with American Medicine. I am going to tell you what's *right* with American Medicine.

I am going to tell you what you, and the entire world already knows: We have the best health care system in the world. I don't know anybody who would prefer to get sick in any other country in the world. I don't know of any other country where it doesn't matter to patients which medical school their physician attended. This is true because American medicine has set the standards for a medical education system that is so uniformly excellent that qualifications of all graduates are assured. And the whole world would like to train in our system.

I'll tell you what else is right with American medicine: Last year we gave approximately ten percent of our services free-of-charge to the needy. We fulfill our responsibility to care for the medicare population, even in the face of a series of betrayals by government with fee freezes and a fouled-up and indecipherable reimbursement system that calls for MAACS. And even with increasing harassment from PROs with denial letters and bureaucratic obstructions to legitimate patient entry into hospitals, often without an opportunity to discuss the problem with a real peer.

But I'm telling the wrong people that we have the best health care system in the world. You already know it.

We need to tell AARP that not only do our elderly receive care from the best health care system in the world, but that it is a fragile system. They must understand that their unceasing pressure for little or no out of pocket cost sharing, that their insistence on mandatory assignment, even for those beneficiaries who can easily afford to pay the same fee paid by non-Medicare patients, may result in a two-tier system of care in which one of the most precious elements of our system - freedom of choice - maybe infringed. They must know that they may not have the best system in the world if they support policies that would convert medical care to a public utility.

And business must be told that they can't have it both ways. They can't count on retaining our support system of health care if they push health policy formulation with only the bottom line in their view, ignoring their responsibility to pay for training the next generation of medical teachers and scientists, and refusing to pay their share of uncompensated care.

And the public must know that the reasons we are able to offer miracles on a daily basis is because our free enterprise

system stimulated drug research and our government has invested in basic and clinical research for the last four decades, and that the complex infrastructure of our research capability can be toppled like a house of cards by a year or two of discontinuity.

They must know that two other important ingredients that make the system they enjoy, the world's best, did also not happen without emphasis placed by the profession, itself.

No where else in the world do physicians participate as heavily in continuing medical education (with the possible exception of Canada) as do we. And no where else do physicians carry out the same intensity and breadth of peer review as do we.

It has been said that five percent of America's physicians have some impairment. I don't know if that number is accurate, but if it is, it certainly places us among the least impaired of America's professions. And, do any other professions here, or anywhere in the world, have programs to rehabilitate the impaired as do we in American medicine? We accepted, long ago, that fact that even one impaired physician is too many.

So what I'm saying is this: Lift up your heads. We have challenges, of course, but we have so much to be proud of.

Further questions in the same public opinion poll that I referred to earlier, so recent that it's not even published yet, showed that, in response to the question, "Thinking about your most recent visit to a medical doctor, would you say you were very satisfied, fairly satisfied, not too satisfied, or not at all satisfied with . . ."

Very or Fairly Satisfied

1. The way the doctor's staff treated you	93%
2. The medical care you received	92%
3. The way the doctor explained things to you	87%
4. The amount of time you had to wait to get an appointment	81%
5. The amount of time you had to wait before seeing a doctor	77%
6. The fee the doctor charged	74%
7. Overall how satisfied were you	91%

All these represent an improvement from 1983 except waiting time for an appointment. Of course, we have a job to do to retain the superiority of our medical care system. We must maintain the confidence of our patients by adhering to the principles of professionalism I outlined earlier. They are the key to an orderly and acceptable evolution of health care policy. And we must be forceful and unified, applying our intelligence and strengthening our organizational and communication skills. We are the best, and we intend to stay that way. Our system is worth working to keep.



Good exhibits and good food drew crowds in to the exhibit area.

EXHIBITOR APPRECIATION



Ms. Carolyn Kuykendall with Marion Labs, sponsored a popcorn break in the exhibit area in the convention center.



Mr. Bob Blankenship of National Medical Rentals won a briefcase in a drawing for the exhibitors.



Dr. Robert Langston won a trip to Puerto Vallarta (above) and Dr. John Burge won a video cassette recorder.



Thanks to all our exhibitors for making the 1987 convention one of the best.



An impromptu yo-yo contest by the exhibitors was one of the highlights in the convention center.

Photos by Mike Sloate

FINAL SESSION HOUSE OF DELEGATES

Speaker of the House, Amail Chudy, called the House of Delegates to order at 11:15 a.m. on Sunday, April 26th. Payton Kolb gave the invocation.

Voting members of the House who registered for the final session were: ARKANSAS, Hoy Speers; BAXTER, Robert Baker, John Guenthner; CARROLL, Oliver Wallace; CRAIGHEAD-POINSETT, Robert Frey, Douglas L. Maglothin, Joe Stallings, Jr., Don B. Vollman, Jr.; CRAWFORD, Millard Edds; CRITTENDEN, H. Wade Westbrook; FAULKNER, J.J. Magic; FRANKLIN, David Gibbons; GARLAND, Brenda Powell; GREENE-CLAY, Richard Martin; HEMPSTEAD, Jim McKenzie; JEFFERSON, John Crenshaw, William Nuckolls, George Roberson, Raymond A. Irwin; LEE, Dwight Gray; MISSISSIPPI, Eldon Fairley; MONROE, Neylon C. David; PHILLIPS, Robert D. Miller, Jr.; POLK, David D. Fried; PULASKI, Edwin Hankins, III, Robert Shannon, Charles Rodgers, William Golden, Fred Henker, Jerry Mann, Robert Valentine, Alan Storeygard, Coburn Howell; SEBASTIAN, A.C. Bradford, David Busby, Wendell Ross; TRI-COUNTY, Michael Moody; UNION, James Sykes; WASHINGTON, David Rogers; WHITE, Daniel S. Davidson; YELL, James L. Maupin; COUNCILORS, Merrill J. Osborne, John Hestir, L. J. Pat Bell, Lloyd G. Langston, Paul Wallick, George Warren, Ronald J. Bracken, Paul Cornell, Warren Douglas, Frank Morgan, Charles Logan, William Jones, Harold Purdy, Larry Lawson, Richard Pearson, Robert Langston, and Morton C. Wilson; PRESIDENT-ELECT, W. Ray Jouett; SECRETARY, James Weber; TREASURER, James M. Kolb; SPEAKER OF THE HOUSE, Amail Chudy; VICE SPEAKER OF THE HOUSE, Sybil Hart; IMMEDIATE PAST PRESIDENT, John Burge; PAST PRESIDENTS, Joe Verser, Ross Fowler, Ben Saltzman, T.E. Townsend, Payton Kolb, A.E. Andrews, Morris Henry, and Asa Crow.

Speaker Chudy recognized the Nominating Chairman, Charles Logan and asked him to come forward and gave the following slate of officers nominated by his committee:

President-elect:	John Hestir, M.D., Dewitt A.E. Andrews, M.D., Texarkana
First Vice President:	Wendell Ross, M.D. Fort Smith
Second Vice President:	James Pappas, M.D., Little Rock
Third Vice President:	Lee B. Parker, Jr., M.D., Fayetteville
Treasurer:	James M. Kolb, Jr., M.D., Russellville
Secretary:	James R. Weber, M.D., Jacksonville

Speaker of the House:

Amail Chudy, M.D.,
North Little Rock

Vice Speaker

of the House:

Sybil Hart, M.D., Blytheville

COUNCILORS:

District 1:	Merrill J. Osborne, M.D., Blytheville
District 2:	Jim E. Lytle, M.D. Batesville
District 3:	Hoy B. Speer, M.D., Stuttgart
District 4:	Lloyd Langston, M.D., Pine Bluff
District 5:	George Warren, M.D., Smackover
District 6:	F.E. Joyce, M.D., Texarkana
District 7:	Thomas H. Hollis, M.D., Hot Springs
District 8:	Charles Logan, M.D., Little Rock Paul Cornell, M.D., Little Rock Warren Douglas, M.D., Little Rock Richard N. Pearson, M.D., Rogers
District 9:	W.P. Phillips, M.D., Fort Smith
District 10:	T.E. Townsend, M.D., Pine Bluff
Delegate to the AMA:	
Alternate Delegate to the AMA:	W. Payton Kolb, M.D., Little Rock

A.E. Andrews asked that his name be withdrawn from the slate of officers. John Hestir, Dewitt, was elected by acclamation.

Speaker Chudy asked that Hoy Speer and Jim Magic escort John Hestir to the podium. Dr. Hestir addressed the House as follows in accepting the position of president-elect of the Society:

"I certainly appreciate the honor you have bestowed on me. I am sure we will have an excellent year because I don't know of anybody who I would rather be in this position with than Dr. Jouett. I think you should feel good about the year coming up, about the things we are proposing, and about the things we will do here today. I hope that during Dr. Jouett's term and the succeeding year during my term, we will accomplish the things we set out to accomplish. Thank you."

Nominees for other positions as proposed by the Nominating Committee were also elected by acclamation.

Speaker Chudy asked the House to recognize the fine work that the Arkansas Medical Society staff did on their "maiden voyage" of this 1987 Annual Convention.

The report of the Reference Committee #1 was presented to the House.

REFERENCE COMMITTEE NUMBER ONE

Ronald Bracken, Chairman

"Mr. Speaker and members of the House of Delegates: Your Reference Committee Number One was composed of L.J.P. Bell, Helena; Warren Douglas, Little Rock; John Hestir, DeWitt; Dwight Gray, Marianna; and myself, Ronald Bracken of Hot Springs, Chairman.

Your Reference Committee gave careful consideration to the following items and requests that each item be considered separately:

1. Resolution from Tri-County Medical Society regarding arbitrary acts by trustees, administrators, and commercial entities. The resolution was heard, and by general consent referred to the Council for further study.
2. Resolution from Tri-County Medical Society regarding seat belt use. The resolution was heard, and your Reference Committee recommends adoption of this resolution.
3. Committee on Medical Legislation. The Reference Committee recommends the report be accepted as printed in the March 1987 issue of *The Journal of the Arkansas Medical Society*.
4. Arkansas Medical Society Political Action Committee. The Reference Committee recommends the report be accepted as printed in the March 1987 issue of *The Journal of the Arkansas Medical Society*.
5. Committee on Position Papers. The Reference Committee recommends the report be accepted as printed in the March 1987 issue of *The Journal of the Arkansas Medical Society*.
6. Committee on Public Relations. The Reference Committee recommends the report be accepted as printed in the March 1987 issue of *The Journal of the Arkansas Medical Society*.
7. Committee on Annual Session. The Reference Committee recommends the report be accepted as printed in the March 1987 issue of the Journal of *The Journal of the Arkansas Medical Society*. The members of the Reference Committee wish to commend the Annual Session Committee for an excellent program and a job well done.
8. Fifth Councilor District. The Reference Committee recommends the report be accepted as printed in the March 1987 issue of *The Journal of the Arkansas Medical Society*.
9. Medical Service Review Committee. The Reference Committee recommends the report be accepted as printed in the March 1987 issue of *The Journal of the Arkansas Medical Society*.
10. Report of the Council - Addendum to the Council Minutes, Position Papers on Professional Advertising by Physicians and AIDS. The Reference Committee recommends the report be accepted as printed in the March

1987 issue of *The Journal of the Arkansas Medical Society*.

11. Report of the Executive Vice President. The Reference Committee recommends the report be accepted as printed in the March 1987 issue of *The Journal of the Arkansas Medical Society*.
12. Report of the Arkansas State Medical Board. The Reference Committee recommends the report be accepted as printed in the March 1987 issue of *The Journal of the Arkansas Medical Society*.
13. Resolution of Support for Arkansas State Hospital. The resolution as printed was heard by the Committee. It was unanimously felt by this Committee that because of the loss of accreditation and the possibility of the State Hospital losing its ability to treat people, the Governor's office should be informed of our concern and the Governor should be urged to include in the next Special Session corrective action which would allow the State Hospital to continue to be the strong unit it is and has been.

Mr. Speaker, your Committee recommends the adoption of this resolution.

Mr. Speaker, I move the adoption of this report.

Mr. Speaker, this concludes the report of your Reference Committee Number One. I wish to thank those who appeared before the Reference Committee, my fellow members of the Committee and those members of the staff who assisted us."

Speaker Chudy thanked Dr. Bracken and his committee for their work on the reference committee. Upon a motion of George Warren, the House accepted the report of Reference Committee #1 as presented.

Vice Speaker Hart called for the report of Reference Committee #2. Before reading the committee report, William Jones asked that the Society support Todd Holt, President of the Resident Section, in his campaign as the resident representative on the AMA Council of Medical Education. Dr. Holt had been approached by the AMA Resident Section to run for this position.

REFERENCE COMMITTEE NUMBER TWO

William Jones, M.D., Chairman

"Mr. Speaker and members of the House of Delegates: Your Reference Committee Number Two was composed of Jim Lytle, Batesville; David Rogers, Fayetteville; Charles F. Wilkins, Jr., Russellville; Todd Holt, Little Rock; Kyle McAlister, Little Rock (Medical Student Observer); and myself, William Jones of Little Rock, Chairman.

Reference Committee Number Two held an open hearing on Thursday afternoon, April 23rd, and heard remarks from

Society members on various assigned reports and resolutions. Your Reference Committee gave careful consideration to the following items, and requests that each item be considered separately:

1. Resolution by the Pulaski County Medical Society concerning teenage pregnancy. Mr. Speaker, your Reference Committee recommends adoption of the resolution as published in the March 1987 issue of *The Journal of the Arkansas Medical Society*.
2. Resolution by the Pulaski County Medical Society concerning tobacco smoke. Mr. Speaker, your Reference Committee recommends adoption of the resolution as published in the March 1987 issue of *The Journal of the Arkansas Medical Society*.
3. Resolution by the Pulaski County Medical Society concerning AIDS. Mr. Speaker, your Reference Committee recommends adoption of the resolution as published in the March 1987 issue of *The Journal of the Arkansas Medical Society*.
4. Committee on Public Health. Mr. Speaker, your Reference Committee recommends the report be accepted as published in the March 1987 issue of *The Journal of the Arkansas Medical Society*.
5. Committee on Medicine and Religion. Mr. Speaker, your Reference Committee recommends the report be accepted as published in the March 1987 issue of *The Journal of the Arkansas Medical Society*.
6. Arkansas Medical Society Pension Plan Board of Trustees. Mr. Speaker, your Reference Committee recommends the report be accepted as published in the March 1987 issue of *The Journal of the Arkansas Medical Society*.
7. Professional Relations Committee Report for the Eighth Councilor District. Mr. Speaker, your Reference Committee recommends the report be accepted as published in the March 1987 issue of *The Journal of the Arkansas Medical Society*.
8. Budget Committee. Mr. Speaker, the report of the Budget Committee was received, and the Reference Committee wishes to commend the Budget Committee for its sense of fiduciary responsibility and the many areas where significant cost savings were evident. During the hearing, there was a great deal of support for the formation of a full-time Department of Governmental Affairs in the State Society headquarters. Your Reference Committee endorses this concept. Mr. Speaker, your Reference Committee recommends the adoption of the 1987 budget as printed in the March 1987 issue of *The Journal of the Arkansas Medical Society*.
9. Medical Education Foundation for Arkansas. Mr. Speaker, your Reference Committee recommends the report be accepted as published in the March 1987 issue of *The Journal of the Arkansas Medical Society*.

10. Arkansas Medical Society Resident Physician Section. Mr. Speaker, your Reference Committee recommends the acceptance of the report of the Arkansas Medical Society Resident Physician Section. In addition, your Reference Committee encourages the development of a political education process involving the Arkansas Medical Society staff, our legal counsel, and other interested members of the Society with the Resident Physician Section. This effort would be to encourage the participation of resident physicians in the political process.
11. Arkansas Department of Health. Mr. Speaker, your Reference Committee recommends the report be accepted as published in the March 1987 issue of *The Journal of the Arkansas Medical Society*. The report was extensive, and similar informative reports are encouraged in the future.
12. Resolution from the Public Relations Committee encouraging component medical societies to develop legislative programs on a local level.

RESOLUTION FROM PUBLIC RELATIONS COMMITTEE

WHEREAS, we recognize the practice of medicine is a privilege granted solely by the state government, and

WHEREAS, peripheral health practitioners continually press our general assembly for privileges which are inconsistent with their training, and

WHEREAS, we as individual physicians must take steps to become more involved in the legislative process in order to protect the health and welfare of the public and our profession; therefore be it

RESOLVED, that the Arkansas Medical Society strongly urge the component medical societies to develop local legislative programs and develop mechanisms whereby local physicians will:

- (1) Meet regularly with and become actively involved in advising their legislators and congressmen on medical issues.
- (2) Contribute money on a local level, in addition to the Society's state legislative fund and/or PAC, to local candidates who support medicine.
- (3) Actively participate in the campaigns of their local representatives, and be it further

RESOLVED, that the Arkansas Medical Society encourage local physicians and their spouses to contribute their time and their financial support to the political programs sponsored by the state society and their local component society.

Mr. Speaker, your Reference Committee recommends the adoption of this resolution.

13. Resolution from Baxter County Medical Society concerning the Arkansas Foundation for Medical Care. It reads as follows:

RESOLUTION FROM BAXTER COUNTY CONCERNING THE ARKANSAS FOUNDATION FOR MEDICAL CARE

WHEREAS, the Arkansas Medical Society is the preeminent organization in the state concerned with the quality of medical care, and

WHEREAS, the Society is the longest standing and longest established organization in the state concerned with the quality of medical care, and

WHEREAS, the Arkansas Medical Society is very concerned that the current regulatory mechanism for overseeing the quality of care is being conducted outside of the purview of and without input from the Society; therefore be it

RESOLVED, that the Arkansas Medical Society begin studying its relationship with the Arkansas Foundation for Medical Care and how it might strengthen the role of the Arkansas Medical Society in regulation and delivery of quality medical care.

Mr. Speaker, this resolution considers an area in which there is an ongoing dialogue in the Council and other committees of the Society. Your Reference Committee recommends that this resolution be referred to the Council for continued study.

Mr. Speaker, I move the adoption of this report.

Mr. Speaker, this concludes the report of your Reference Committee Number Two. I wish to thank those who appeared before the Reference Committee, my fellow members of the Committee and those members of the staff who assisted us."

Speaker Hart thanked Dr. Jones and his committee for their work on the reference committee. Upon a motion of George Warren, the House accepted the report of the Reference Committee #2 as presented.

Speaker Chudy recognized Raymond Irwin of Pine Bluff. His address follows.

ADDRESS TO THE 1987 AMS HOUSE OF DELEGATES RAYMOND IRWIN, M.D.

"Mr. Speaker and the House of Delegates, I was asked to come to speak to you by the Jefferson County group who have been involved this year in our legislative affairs. To those who have been around for a while, we have been told over the years by Dr. Elvin Shuffield, before he gave up the job of our legislative representative, that things in the legislature have changed. They are not what they used to be, what worked forty years ago is not effective now. You only need to read the

newspapers to see some of the changes that are being made in the practice of medicine because of the optometrists this year and the chiropractors in the past.

They are going to do more of this if we don't take a different approach to our legislative affairs and try to accommodate some of the things we feel need to be done. In doing this, this year we found out the way the real world works in the legislature. It is quite contrary to our philosophy of how things should be.

The votes to get the optometrists' bill passed was accomplished three months before the legislature met. This bothers us a great deal because we were totally helpless and ineffective in trying to counteract the work that had gone on by the optometrists before the legislature even met. When Ken LaMastus and Mike Mitchell came to talk with us, they informed us of what the situation was in the legislature. We are aware that Ken needs to be running the medical society while Jim Weber is practicing medicine, as well as helping us in the legislature. Even though they are doing a very good job representing us, we need full-time representation. We don't pay Mike Mitchell enough to be our full-time representative; he has to work and make a living too, like the rest of us.

We went to some of our legislative delegation to find out what we could have done to have been a better influence during the past legislative session. We received some very good advice, which was strange to some of us and foreign to what we thought. When we asked the very basic question, "What do the members of the legislature think of doctors?", they responded that they thought doctors were too busy making money and practicing medicine to really get involved in the real cares of the world and the problems in the legislature.

As one legislator pointed out, you go to the hospital in the morning, you go to your office, and then you go back to the hospital and you go home. This is true of most of our days. We are not aware of some of the problems that affect the general public. We are aware of some of the problems through our patients, but not with all aspects of our society. In trying to find out what we might do, even though we realized that it was too late to counteract the effect of the optometrists, we found out that we could hire a legislative representative who would work for us and let it be known that we were interested in the issues that affect medicine and that we are also interested in our legislators and properly informing them on matters pertaining to the practice of medicine.

Over a two-day period, through meetings with our local group, we were quickly able to raise a large amount of money, nondeductible cash donations, through people who were upset over what had happened. These people finally realized we need to change our approach and take a stand. If you talk to Mike Mitchell, Jim Weber, or Ken LaMastus, they will tell you that our efforts, even though it did not stop the optometry bill, were effective during the remainder of the legislative session. This is only a beginning, and I think it shows us what we can do by giving some time and some money. The auxiliary has certainly helped us in this effort as well.

SPEAKERS



Classrooms were full for the many scientific sessions dealing with topics such as otitis media to AIDS.



Mr. Michael E. Dunn from Washington D.C. was the quest speaker at the Shuffield Lecture and Luncheon.



Dr. Richard Inskip spoke to an attentive audience about AIDS.



Mr. Jim Von Grep of Walmart Stores, Inc., involved the audience in a lively question and answer session.



A mock malpractice trial was a highlight of the convention. Physicians from the audience were selected as the jury. The defendant was found not guilty by a narrow margin.

Photos by Mike Sloate

In ongoing meetings with our principle advisor and other members of the legislature, we have come away with some ideas that I would like to express to you today. These ideas come directly from our informant, who has certainly been successful in his political efforts and knows what is going on. First and foremost, he feels that it is imperative that we employ a state legislative coordinator, a full-time man, and pay him well, someone we can trust implicitly to represent our sole interests. In the past, lobbyists have represented too many groups, therefore becoming ineffective.

This will require a staff, probably two secretaries and two leg-men, which is going to require some money. This office can be funded through our dues, which are tax deductible. It can be called the Office of Legislative Affairs or the Arkansas Medical Society Legislative Office or whatever we want to call it. The director of this office should be given a free-hand and an unlimited expense account, whatever he needs to spend, not to buy bribes or influence, but to fulfill the obligations of his job. He should not answer to the House of Delegates, which is a too large of a group, but to a small committee. As I understand from Dr. Jouett, in his inaugural speech last night, he said he is going to appoint a small committee that would oversee this office and monitor their activities and how they spend the money. Our contact feels it is very important that we give this office the time, resources, and a carte blanche to coordinate state efforts in legislative affairs.

In addition, local committees such as we have formed in Jefferson County need to be formed. I realize that not every county is large enough or has enough doctors to contribute enough money to be effective, so in those areas of the state it might be better to use the councilor or congressional districts in forming committees to reach people at a local level. The monies that will be contributed to the people at a local level will not be used to run the state legislative office but will be used to fund some of the activities that are necessary to maintain an influence with the legislators. In other words, when someone files for office, whether he is actually in our district or not, and is a friend of the Arkansas Medical Society and supports its medical principles in general, we will use some of our funds to support him.

Part of our plan is to have an ongoing operation of this type in Jefferson County and be willing to use some of our funds to help candidates in other areas of the state, as long as they are friendly to what we are trying to accomplish, which is to maintain a high standard in the practice of medicine and not see it diluted by privileges granted to paramedical groups, with less than adequate training, through legislative action. I think this is the essence of what they wanted me to bring to you today. This local group can certainly be effective and, in a small way, I think it was effective this year.

One point that was expressed by some of our legislators this year was how hard it is to get in to see a doctor when they have a cold or something. We may not think a cold is important but to them it may be very important at the moment. So the third thing I want to suggest is that we inform our office

personnel of who our legislators are in our area, and if they do need some attention, perhaps arrangements can be made for you, or the person taking your appointments, to see them. If a legislator needs an eye exam, the optometrists don't charge him and they also give him free glasses. I don't know if what the legislators want is free medical care, but I think what they do want is some recognition of who they are so that when they do call your office they can be recognized for what they are. Also, I think we should each talk to our office personnel to tell them that with the changes that are appearing in the practice of medicine, their job may depend on the fact that we have a legislature out there that is favorable to the ideas that we want to uphold and support.

In talking about how much money this will take, if we figure 2,000 physicians in the state of Arkansas, if each of them would give \$200 a piece, that would be \$400,000 a year and that is more than enough to support the type of action we are suggesting. If half of them gave \$200 a year voluntarily, this would be \$200,000 a year, which again, would be more than enough to support this type of activity. In a non-election year such as this, it would not take as much as it will next year when so many will be running for office. The time to contact these people that are going to be in the legislature is when they file, so we can get to know them and to let them know we are supportive of them and that we want them to be supportive of us and that we are willing to help them where we can.

We have been told by several members of the legislature that the most dedicated groups of people of this state are the optometrists and chiropractors. They will give you their shoe leather, their time, they will pass out cards for them, they give plenty, and they have time available for the needs of the people who are running for the positions in the legislature. Perhaps some of us can find time to help our legislators; if we are too busy in our practice perhaps we can get our wives to help. It has also been suggested that we get to know these people socially, at the local level and not necessarily at a country club reception. Perhaps meeting at someone's home or a place where they have sports shirts, fish fries, beer, or whatever they want so we can get to know them on a one-on-one basis so that we can have an influence on these people when they go back into the legislative session.

None of the ideas that I have expressed here today are new to you and they are not original to us, but I think we have been enlightened this year like never before and that these efforts can be rewarding. I hope that each of you will take back to your own district this idea and try to form some local committee that will be supportive of with our state coordinator's efforts. I thank you for your time."

Speaker Chudy asked Chairman of the Council, Larry Lawson, to come forward to present the Supplemental Report of the Council on actions taken during the Annual Session. This report is printed following these minutes.

Speaker Chudy read the names submitted by the third and sixth Congressional Districts as nominations to be submitted to the governor for his appointments to the State Board of Health:

District #3: Ken Lilly, Fort Smith; Sanford Hutson, Paris; and Elizabeth Rantz, Fayetteville.

District #6: Howard Harris, Dumas; Brenda Powell, Hot Springs, and Paul Wallick, Monticello.

Member-at-large: Robert D. Miller, Helena; Jim Armstrong, Ashdown; and Charles Logan, Little Rock.

Speaker Chudy recognized President Ray Jouett. Ray Jouett made a motion that John Guenthner, Mountain Home be reappointed as representative of the Arkansas State Elective Medical Society on the Arkansas State Medical Board. The motion was seconded and Dr. Guenthner was reappointed by acclamation.

Speaker Chudy recognized William Nuckolls, Pine Bluff. Dr. Nuckolls reiterated the fact that physicians need to band together and organize for stronger legislative powers. He then made a motion, which was seconded, that the Executive Committee of the Arkansas Medical Society write a letter to the Governor and Legislators asking that they do whatever they can to improve the secondary school education in our state (even if it means raising taxes). Dr. Nuckolls stressed that an uneducated child grows up to be an uneducated adult in the work place.

Speaker Chudy recognized James Weber, Chairman of the State Legislative Fund who challenged each member to contribute \$500.00 to the State Legislative Fund. He reported that he had already received a \$500.00 contribution from each member sitting at the head table.

Speaker Chudy wished the members a safe trip home and adjourned the meeting at 12:30 p.m.

The Council met in a brief reorganizational meeting and selected Larry Lawson as Chairman of the Council by acclamation.

The meeting was adjourned.

REPORT OF THE COUNCIL

J. Larry Lawson, Chairman

The Council met on Thursday, April 23, 1987, and conducted the following business:

1. A motion was passed to retain the Cost Effectiveness Committee but change the name to more appropriately identify the Committee.
2. Heard a report from Mike Mitchell, Arkansas Medical Society General Counsel, on the current status of the Schaefer lawsuit. The new trial date is for late May.
3. Heard an address from Dr. Alan Nelson, Chairman of the American Medical Association Board of Trustees,

concerning tort reform and other legislation in Washington.

4. The Council voted to contact state-level workers compensation officials to see if what had been achieved in the Arkansas State Arbitration Commission is now being addressed in another way. If so, the Council would like to dissolve this committee.
5. Voted to appoint Jim F. Kyser of Little Rock to the Arkansas Medical Society Pension Plan Board of Trustees, replacing Charles Logan whose term expires this month.
6. Jean Gladden was reappointed to the Board of Trustees of the Medical Education Foundation for Arkansas.
7. Heard a report from Ken LaMastus on the current occupancy of the Arkansas Medical Society Building and an update on the Arkansas Medical Society staff.

The Council met on Friday, April 24, 1987, and conducted the following business:

1. Heard a presentation from an insurance group who proposed that the Arkansas Medical Society set up a Medical Society sponsored insurance company.
2. Approved a motion for the Council to go on record recommending to the House of Delegates that a mandatory special assessment of \$100.00 be placed on each member which would provide funding for the Department of Governmental Affairs of the Arkansas Medical Society.

The Council met on Saturday, April 25, 1987, and conducted the following business:

1. Heard a report from William Golden who represented the Arkansas Medical Society at an American Medical Association Young Physicians meeting.
2. Voted to support Todd Holt, President of the Resident Section, in his candidacy to the American Medical Association's Medical Education Commission.
3. Heard a request from Charles Rodgers, Chairman of the Medical Services Review Committee, concerning their input in changing the bylaws of the Medical Services Review Committee.
4. Approved appointments to the Medical Services Review Committee are as follows: Les Anderson, Lonoke, representing Family Practice; Robert S. Gaston, Little Rock, representing Internal Medicine; Paul Anderson, Fort Smith, representing Surgery; Stephen R. Marks, North Little Rock, representing Ob/Gyn; Susan Keathley, Little Rock, representing Pediatrics; Mae Nettleship, Fayetteville, representing Pathology; and Stuart McConkie, Hot Springs, representing Orthopedics.
5. Howard H. Cockrill, Jr., has been appointed to fill the unexpired term of Murray Harris representing Radiology on the Medical Services Review Committee.

6. William Galloway has been appointed to fill the unexpired term of Douglas Horan representing Dermatology on the Medical Services Review Committee.
7. Approved appointments to the Sub-committee of Sub-specialties of the Medical Services Review Committee are as follows: Carl L. Williams, Fort Smith, representing Thoracic Surgery; Thomas J. Smith, Little Rock, representing Gastroenterology; Robert Vogel, Little Rock, representing Plastic Surgery; John C. Schultz, Little Rock, representing Pulmonary Disorders; Kelsy Caplinger, Little Rock, representing Pediatric Allergies; G. Doyne Williams, Little Rock, representing Cardiovascular Surgery; Robert F. McCrary, Hot Springs, representing Nephrology; Robbie R. Atkinson, Pine Bluff, representing Oral Surgery; and Gene Shelby, Little Rock, representing Emergency Physicians, which is a new position.
8. Approved members of the Arkansas Medical Society Political Action Board are as follows: John Crenshaw, Pine Bluff; Robert Miller, Helena; Ken Lilly, Fort Smith; Ramona Taylor, West Memphis; Roger Cagle, Paragould; Richard Martin, Paragould; John Giller, El Dorado; Paul Meredith, Texarkana; C.G. Melton, Blytheville; Dan Davidson, Searcy; Robert H. Langston, Harrison; Joe H. Stallings, Jonesboro; Gwen Pappas, Hot Springs; Sharon Rauls, Blytheville; Virginia Kutait, Fort Smith; James Hagler, Little Rock; James H. Landers, Little Rock; Payton Kolb, Little Rock; and Hoy Speer, Stuttgart.
9. Reappointed James Weber, Asa Crow, and Payton Kolb to the Board of Trustees of the Arkansas Medical Society State Legislative Fund.
10. Appointed Charles Rodgers to District Eight of the Professional Relations Committee.

The Council met on Sunday, April 26, 1987, and conducted the following business:

1. Agreed to send a letter to Senator Paul Benham of Marianna thanking him for his presentation to the Council on Friday.
2. Reappointments to the Position Papers Committee were James Kolb, Russellville; Payton Kolb, Little Rock; and George Warren, Smackover. The position held by James Weber was not filled.
3. The Council made the appointment of Robert T. Ross of Pine Bluff to the Impaired Physicians Committee.
4. Jim Armstrong, Ashdown, was appointed to the Budget Committee replacing F.E. Joyce whose term expired.
5. Appointed an ad hoc committee chaired by Gilbert Dean, President of the Fifty Year Club to write bylaws for the Fifty Year Club.
6. The Council recommended that rather than getting involved with the suggested Bar Association's CRACK program, that we make a joint effort with an AIDS program.
7. Mike Moody, Lloyd Langston and John Burge were selected as nominees to be submitted to the Governor for the new Health Services Agency.
8. The Council accepted the Arkansas Medical Society's 1986 audit prepared by Baird, Kurtz, and Dobson.
9. The Council recommends that the 1989 Annual Convention be in Hot Springs, in 1990 in Little Rock, and in 1991 in Hot Springs.
10. Heard a report from Charles Rodgers concerning the Political Action Committee.
11. Heard a report from W. Ray Jouett on the Leadership Conference in February.



SOCIALIZIN'

Blue Cross Blue Shield hosted a reception Thursday evening.



Jim Robkin and the Hog Wild band had participants cheering in the aisles Friday evening.



Razorback spirit ran high in Fayetteville!

SOCIALIZIN'



Young and not-so-old alike enjoyed the music.



Jack Terry and The Big Band provided dancing music Friday night.



Photos by Mike Sloate



Past President's Club

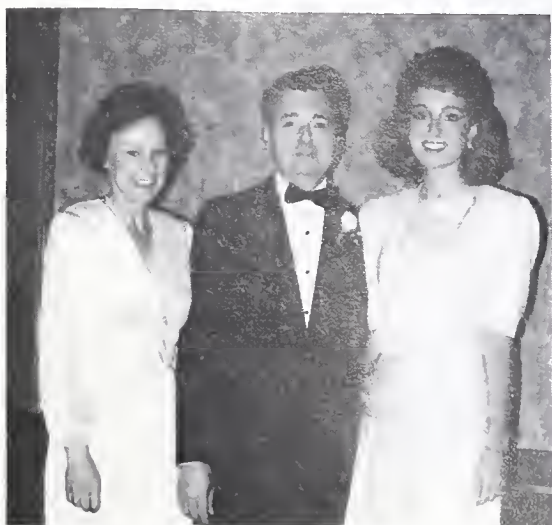
Members present were (left to right): C. C. Long, Joe Norton, Charles Wilkins, Payton Kolb, Asa Crow, A. E. Andrews, John Bruge, Ross Fowler, Stanley Applegate, Ben Saltzman, T. E. Townsend, Purcell Smith and Morriss Henry.



Dr. Ken Lilly presented the Shuffield Award to Mr. David J. Jones.



Dr. Ray Jouett , the medical society president for 1987-88, received the gavel from Dr. Ken Lilly.



Ms. Rebecca Jouett, Dr. and Mrs. Jouett's daughter was present at the inaugural banquet honoring her father.



Fifty Year Club Members

GENERAL PROGRAM

The program theme was "Not Everything in Medicine is Black or White".

Thursday morning began with a Mock Malpractice Trial organized by Dewey Watson, an attorney with Friday, Eldredge and Clark law firm in Little Rock. Other trial participants included Laura Hensley and C.J. Hall, also of the Friday, Eldredge and Clark law firm. Earl Hunt, Chris Lalande, Perry Whitmore, Jr., Alan Gibson, representatives from the St. Paul Insurance Company participated as the plaintiff, defendant and witnesses in the case. Though the trial was written in such a way that the plaintiff was to win, the example of "Not Everything in Medicine is Black or White" was proven; the defendant won the case. An actual jury selection was made from the audience. The verdict of both the jury and the audience was in favor of the defendant.

The Socioeconomic Seminar, featuring Mr. Jim von Grep, Director of Corporate and Public Affairs of Wal-Mart, was held on Thursday afternoon. Mr. von Grep spoke on "Corporate Interest in Health Care." The session concluded with an active question and answer session involving audience participation.

The General Scientific Sessions opened at 8:30 on Friday morning. A panel discussion on "Otitis Media in Infants and Children" was presented by Drs. Roger Bost, Kelsy Caplinger,

Charles Floyd, James Pappas, and Robert Seibert. Dr. Stevers Golladay presented a program on "All Terrain Vehicles - Injuries and Death", which was followed by "The Team Approach to Multiple Injured Patients" and "Life-threatening Musculoskeletal Injuries" by Drs. John Cone and Mark McAndrews, respectively. Friday afternoon featured Dr. Richard Inskip, past president of the American Academy of Family Physicians. Dr. Inskip gave an informative update on the Acquired Immune Deficiency Syndrome. Following an ice cream break, Dr. David Lipschitz presented a program on "The Interrelationship Between Nutrition and Cancer." Dr. Susan Jay concluded the afternoon with a presentation on "Adolescent Eating Disorders."

The Saturday Morning Concurrent Scientific Sessions featured "Radial Keratotomy" by Dr. Michael Farrell Brown; "Sports Medicine" by Mr. Tom Cantwell; "Current Concepts in Trauma - the Advanced Trauma Life Support (ATLS) Course" by Dr. Charles Mabry; and "Breast Cancer - Diagnosis and Treatment" by Drs. James Bledsoe, Frank Panettiere, Bernard Fioravanti, and Ken Gardner.

A Joint Specialty Luncheon was held at 12:00 noon featuring Dr. William Emery and Scott Abell of the Whirlpool Corporation speaking on "What Corporate America Wants from Organized Medicine."

RELATED MEETINGS

The Arkansas Chapter of the American College of Surgeons met for a noon luncheon on Friday, April 24th.

The Arkansas Society of Otolaryngology met on Saturday morning for coffee and rolls. Drs. Michael C. Reese and Glen G. Fincher discussed "Mechanism and Treatment of Sinus Infections and Diseases." Dr. Carlton L. Chambers moderated a panel discussion on several interesting and unusual cases.

The Arkansas Chapter of the American College of Radiology met for an executive committee meeting, followed by a general business meeting.

The Arkansas Society of Pathologists met for a general business meeting, which concluded at noon.

The Arkansas Society of Internal Medicine met for a program presented by Dr. William Golden, Trustee of the American Society of Internal Medicine and President of the Arkansas Society of Internal Medicine. Dr. Golden spoke on

the "Future Reimbursement for Internal Medicine Activities". General business followed the meeting.

The Arkansas Urologic Society met for cocktails and a luncheon at noon on Saturday. Dr. Harry C. Miller, Professor and Chairman of the Department of Urology at George Washington University, was featured speaker. A business session followed the scientific program.

The Arkansas Academy of Family Physicians featured Dr. Richard Inskip, Past President of the American Academy of Family Physicians, as their guest speaker. A general business meeting followed his presentation.

The Arkansas Academy of Ophthalmology met on Saturday morning with Dr. Tom Spoor, Associate Professor of Ophthalmology at Wayne State University of Medicine, as their featured speaker. Dr. Spoor spoke on "Orbital Disease Neurophthalmology." Immediately following the luncheon, a brief political organizational meeting was held.

OTHER ACTIVITIES

BLUE CROSS BLUE SHIELD PARTY

Blue Cross Blue Shield of Arkansas hosted a cocktail reception for all members and guests on Thursday evening. Members of the Blue Cross Blue Shield staff were there to welcome our members. The Society expresses its appreciation to Blue Cross Blue Shield for sponsoring this event. This reception is looked forward to each year.

COUNCIL RECEPTION SPONSORED BY A.P.I.

Chairman of the Council, Larry Lawson, headed the receiving line for the Council Reception sponsored by American Physician Insurance on Saturday evening. Other members of the Executive Committee and their spouses making up the receiving line were President Ken Lilly, President-elect W. Ray Jouett, Secretary James Weber, and Immediate Past President John Burge.

PAST PRESIDENT'S LUNCHEON

Physicians who have served as president of the Arkansas Medical Society were guests of the Society for a luncheon at the Old Post Office on the Square. Those in attendance were C.C. Long, Morriss Henry, Ben Saltzman, Charles Wilkins, A.E. Andrews, Stanley Applegate, Purcell Smith, Asa Crow, John Burge, Ross Fowler, Payton Kolb, T. E. Townsend, and Joe Norton.

FIFTY YEAR CLUB

Members of the Fifty Year Club met for a lunch on Friday, April 25th. After a luncheon, the Club elected the

following officers: President, Gilbert Dean of Little Rock; Vice President, Jim McKenzie of Hope; Secretary, Joe Verser of Harrisburg; and Treasurer, Frank Burton of Hot Springs.

Physicians eligible for the Fifty Year Club this year were: Drs. John W. Dorman of Springdale, William B. Harrell of Texarkana, J. Arnold Henry of Russellville, George W. Jackson of Hot Springs, Albert E. Martin of Bentonville, Bert L. Phillips of North Little Rock, James L. Pickens of Rogers, Robert H. Robbins of North Carolina, and C. Yulan Washburn of Ward.

PRAYER BREAKFAST

The Committee on Medicine and Religion, chaired by Fred Henker, III, sponsored a Prayer Breakfast and Seminar on Sunday morning. Music was provided by David Hogan of Fort Smith. The seminar titled "A Time to Live, a Time to Die" was presented by W.D. White of St. Andrews Presbyterian College, Laurinburg, South Carolina; Mary Waterman, Nursing Instructor, Garland County Community College; Joe B. Hall, M.D., Fayetteville; and Tom Cole of Houston, Texas.

MEMORIAL SERVICE

John Crenshaw, Pine Bluff, served as Chairman of the Memorial Service. Charles Miller read from the scriptures and gave the invocation. President Ray Jouett read the names of deceased society members, while Mrs. James Gardner, President of the AMS Auxiliary, lit a candle for each member named. Mrs. Gardner read the names of each deceased Auxiliary member, while Dr. Jouett lit the candles.

IN MEMORIAM

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INAUGURAL BANQUET

President Ken Lilly presided at the dinner on Saturday evening, at which time Ray Jouett of Little Rock, was installed as the 112th President of the Arkansas Medical Society.

Seated at the head table for the dinner were members of the Executive Committee and their wives and Dr. and Mrs. William White of Searcy. Dr. White offered the invocation and Mrs. White gave a piano recital of classical music for Dr. Jouett's entertainment.

President Lilly introduced several guests and officers of the Auxiliary. Included were Mrs. Robert Valentine, Past President of the Auxiliary; Mrs. James Gardner, President of the Auxiliary; Mrs. Albert Strauss, AMA Auxiliary Recording Secretary; Mrs. Robert Shannon, Arkansas State Nurses' Association; Mr. Earl Eddins, Arkansas Hospital Association; and Nancy Kintzel, AMA representative.

Dr. Lilly expressed the appreciation of the membership to the American Physicians Insurance for the Council Reception sponsored by API prior to the banquet.

The Public Relations Committee has selected the recipient of the 1987 Shuffield Award. This award is given to a non-physician for outstanding contributions to health care. It is presented in memory of Drs. Joe and Elvin Shuffield, whose many years of faithful service to medicine and the people of Arkansas symbolize that which is the best in the medical profession.

Dr. Lilly recognized Dr. Marvin Leibovich to introduce the award winner. A film was presented on the accomplishments of David J. Jones. David Jones is from Little Rock and served as the President and General Manager of KARK-TV. He is currently the Vice Chairman of Sales and Marketing of the United Broadcasting Corporation (parent of KARK-TV) and has been the leader in the development of the present emergency medical service system in the Pulaski county area. In establishing the system, Mr. Jones recognized the importance of medical control over the paramedics and developed a board of physicians from the major hospitals in Pulaski county to insure that quality medical care would be provided.

While serving as President and General Manager of KARK-TV, Mr. Jones provided many hours of free air time to medically-related topics and the promotion of health and safety information. Because of his leadership, KARK has sponsored at least two statewide CPR courses in conjunction with the Red Cross and the American Heart Association, which have directly resulted in over 1,000 Arkansans being trained to perform CPR.

David and his wife, Betty, currently reside in Mabelvale, outside of Little Rock. In addition to being on the Board of Directors of the Salvation Army, Easter Seals, and Baptist Medical System, he was most recently chosen as Citizen of the Year for 1987 by the March of Dimes.

Mr. Jones came to the podium and accepted his plaque. He expressed his appreciation to the Public Relations Committee and the Arkansas Medical Society for this honor.

Dr. Jouett introduce his guest and friend, Mrs. William White from Searcy, who entertained us with a piano recital of Dr. Jouett's favorite classical music.

President Lilly expressed appreciation to the membership for allowing him to serve as the 111th president of the Arkansas Medical Society and reminded the membership of the custom which emphasized the continuity of medicine from the past to the future. He asked all the past presidents in the audience to come to the podium for the installation of Dr. Jouett as the 1987-88 President of the Arkansas Medical Society.

The oath of office of the presidency was taken by Ray Jouett of Little Rock. Dr. Lilly presented Dr. Jouett with the gavel to use during his presidency.

President Jouett presented a plaque of appreciation to Dr. Lilly for his year of outstanding service as President of the Arkansas Medical Society.

Dr. Jouett introduced members of his family and special friends who were in attendance. He then gave his inaugural address. The address is printed elsewhere in this issue.

REGISTRATION FIGURES 111th Annual Session

Physicians (including residents)	241	Guests	13
Residents	18	Technical Exhibits	41
Medical Students	2	Scientific Exhibits	8
Auxiliarians	109	TOTAL	432

EXHIBITORS

The Arkansas Medical Society wishes to thank the following for helping make the 1987 Annual Session a success.

SCIENTIFIC EXHIBITORS

- | | |
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| <p>"Unusual and Minimal Breast Tumors in a Community Hospital. Radiologic and Pathologic Correlations", Drs. Keith Hackler and Anthony Hui, Antaeus Institute, Fayetteville.</p> <p>"Maternal Serum Alpha-fetoprotein Screening Program for Neural Tube Defects", Dr. J. Gerald Quirk, Becky Butler, LCSW, and Connie Miller, Ph.D., Arkansas Genetics Program, University of Arkansas for Medical Sciences, Little Rock.</p> <p>"Fine Needle Aspiration: Maximal Utilization", Drs. Carlos Araoz and Terrence Oddson, St. Vincent Infirmary Cancer Center, Little Rock.</p> <p>"Versatility of the Carbon Dioxide Laser in the Treatment of</p> | <p>Skin Cancers".Dr. Spencer D. Albright, III, Albright Laser Surgery Clinic, Fayetteville.</p> <p>"Ventricular Rate Responsive Activity Pacing in Children", Drs. W. T. Dungan, E. A. Kiel, G. R. Westerman, R. E. Reading, J. B. Norton, and S. H. VanDevanter, University of Arkansas for Medical Sciences and Arkansas Children's Hospital, Little Rock.</p> <p>"Preventive and Protective Taping", Tom Cantwell, Parker Orthopaedic Spine Institute, Fort Smith.</p> <p>"Cansurmout", Beth Brooks, Arkansas Cancer Society, Little Rock.</p> <p>"Arkansas Caduceus Club", Ms. Janet Honeycutt, University of Arkansas for Medical Sciences, Little Rock.</p> |
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TECHNICAL EXHIBITORS

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Treasurer	James M. Kolb, Jr., 305 Skyline Drive, Russellville 72801
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Vice Speaker	Sybil R. Hart, P. O. Box 312, Blytheville 72316
Delegates to the AMA	Joe Verser, P. O. Box 106, Harrisburg 72432
	T. E. Townsend, 1420 West 43rd, Pine Bluff 71603
	A. E. Andrews, 1311 Rio Grande, Texarkana 75503
Alternates	Richard N. Pearson, 6 Halstead Circle, Rogers 72756
	W. Payton Kolb, 230 Medical Towers Building, Little Rock 72205
	George W. Warren, P. O. Box W, Smackover 71762

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President 1986-1987
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ARKANSAS MEDICAL SOCIETY AUXILIARY CONVENTION REPORT APRIL 23 - 26, 1987

Mrs. Robert Valentine, President of the Arkansas Medical Society Auxiliary presided at a pre-convention board meeting April 23, 1987 at 2:00 p.m.

Reports were heard from committee chairmen who had recommendations for action in the House of Delegates. President Valentine commended the committee chairmen, and asked all Board Members to exchange information with all incoming Board Members.

After the pre-convention board meeting, many of the Auxiliary members attended the Socioeconomic Seminar in joint session with the Arkansas Medical Society. Guest speaker was Mr. Jim von Grep, Director of Corporate and Public Affairs for Wal-Mart Stores, Inc.

The Sixty-Third Annual Session of the Arkansas Medical Society Auxiliary was called to order by President Valentine, Friday, April 24, 1987.

Mrs. John Hopper, President of the Southern Medical Society Auxiliary, and Mrs. Albert J. Strauss, Jr., AMAA Recording Secretary, were guest speakers. Special guests were: Mrs. Sandy Mitchell, President of the Missouri State Medical Society Auxiliary; and Mrs. Eileen Dyer, President-elect of Missouri State Medical Society Auxiliary.

Reports were heard from officers, committee chairmen, and presidents of county auxiliaries. Delegates to the annual AMA Auxiliary Convention were appointed. The 1987-88 budget was approved with an increase of funds to encourage greater participation of officers and committee chairmen to attend workshops and seminars. County Auxiliaries were presented achievement awards for outstanding service. A new health service project was approved by the House of Delegates, AIDS Education Resource Network. AMA-ERF Chairman announced the total raised by all counties of \$10,494.87.

Mrs. Albert J. Strauss led a membership workshop bringing current printed materials and suggestions to the attention of the membership committee.

A new slate of officers were elected by the House of Delegates: Mrs. James L. Gardner, President; Mrs. Ray Jouett, President-elect; Mrs. Clyde Campbell, Recording Secretary; and Mrs. James Weber, Treasurer.

Auxiliary members attended a joint luncheon with the Medical Society. The Shuffield Lecture was presented by guest speaker Mr. Michael E. Dunn, Legislative Consultant, Washington D.C.

The Past Presidents had their annual breakfast together with their usual flair for a good time. The gifts brought from the various counties were drawn for at intervals throughout the convention.

A luncheon at the Old Post Office Restaurant and the inauguration of Mrs. Jim Gardner as the new president of the Arkansas Medical Society Auxiliary brought an end to the Sixty Third Annual Session of the Arkansas Medical Society Auxiliary.

The post-convention board meeting was convened immediately after the luncheon.



Officers of the Arkansas Medical Society Auxiliary. Back row: Cathy Campbell, Cynthia Weber, Sarah Meredith. Second row: Helen Osborne, Jeanette Burgess, Gypsy Steele. First row, Sarah Jouett, Mary Gardner.



Mary Gardner, president of the Auxiliary, spoke during the proceedings.



Mrs. Albert Strauss, President-Elect, AMA Auxiliary.



*Past President's Annual Breakfast Meeting
Front row, left to right: Mrs Paul Schaefer, Mrs. paul Cornell, Mrs. Gordon Oates, Mrs. Jerry Blaylock, Mrs. Kemal Kutait, Mrs. Lynn Harris and Mrs. Carl Parkerson. Back row, left to right: Mrs. Art Martin, Mrs. Raymond Peebles, Mrs. Charles Wilkins, Mrs. Frank Morgan, Mrs. Curry Bradburn, Mrs. Herbert Taylor, Mrs. Walter Mizell, and Mrs. Harold Langston.*



Nita Valentine officially passed the auxiliary presidency to Mary Gardner.

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Schistosomiasis: A Twenty-Year Review

Amer Z. Al-Juburi, M.D. *, G. Mukhlis, M.D., J. Muhsen, M.D., and H.C. Miller, M.D.

The word *Schistosoma* is derived from the Greek "Schistos" meaning cloven and the word "metron" meaning measure. This, in reality, means split body typical of the Trematode worms or flukes that live in human blood vessels and which appear to have a "split body". The life cycles of all parasitic flukes in man are complex. In general, fertilized eggs are produced by sexually mature adults in the definitive host, i.e., the specific host or hosts who harbor the sexually mature stage of a particular parasite. All flukes are hermaphroditic except *Schistosomes*, which are diecious. There are a number of species of *Schistosoma* but *haematobium* is the one which invades the portal and the vesical circulation as well as that of the ureters. For part of the life cycle, *haematobium* parasitizes several species of fresh water snails, hence the name "snail fever". Although there is evidence that vesical schistosomiasis was present in Egypt in ancient times, the causative organism was not discovered until 1851 by Bilharz of Cairo.

Schistosomiasis may be found as *Schistosoma japonicum*, *Schistosoma mansoni*, or *Schistosoma haematobium*. *Schistosoma japonicum* (oriental blood fluke) causes intestinal, hepatic, and lung schistosomiasis. This is the most dangerous form as the worms are widely disseminated in the body. Distinctive eggs, with very small lateral spikes, appear in the stool. The vector snail is *Oncomelania*.

Schistosoma mansoni involves primarily the liver and the rectum. Distinctive eggs are laterally spiked and appear mainly in stools. The vector snail is *Biomphalaria glabrata*.

Schistosoma haematobium (vesical blood flukes) have eggs with one polar spike and appear mainly in urine. Vector snails are *Bulinus* and *Physopsis*.

Schistosomiasis, or bilharziasis as it is also termed (and memorializing its discovery), of the urinary tract is, in terms of the entire world, a very common disease. It is endemic in Africa, the Middle East, India, China, and parts of southern Europe. With the increased world travel the likelihood of Americans becoming infested had increased. Isolated cases have been reported already and more will undoubtedly be found in this country.

The adult male worm measures 10-15 mm long and about 1 mm wide while the adult female worm measures 20 mm long and 250 micron in maximum width. The male body is trabeculated and spiny while the female is cylindrical and not spiny except for the suckers. The male had a gynaecephoric (copulatory) canal which enfolds the female, especially during copulation and egg deposition. The testes are 4-5 in number and are situated dorsally at the beginning of the gynaecephoric canal. The ovary is elongated and situated in the posterior half of the worm. The uterus is a straight tube and generally contains 20-30 ova at all times. The ovum had a terminal spine and measures 120-160 microns long by 40-60 microns wide.

Schistosoma haematobium is usually a long-lived worm with an average life span of five to eighteen years. There have been some recorded cases of patients in whom living adult worms have been recovered up to 25-30 years after their having departed the endemic area for the last time.

As illustrated in the life cycle diagram (Fig. 1), the eggs and miracidia voided in the urine of an infected person, find

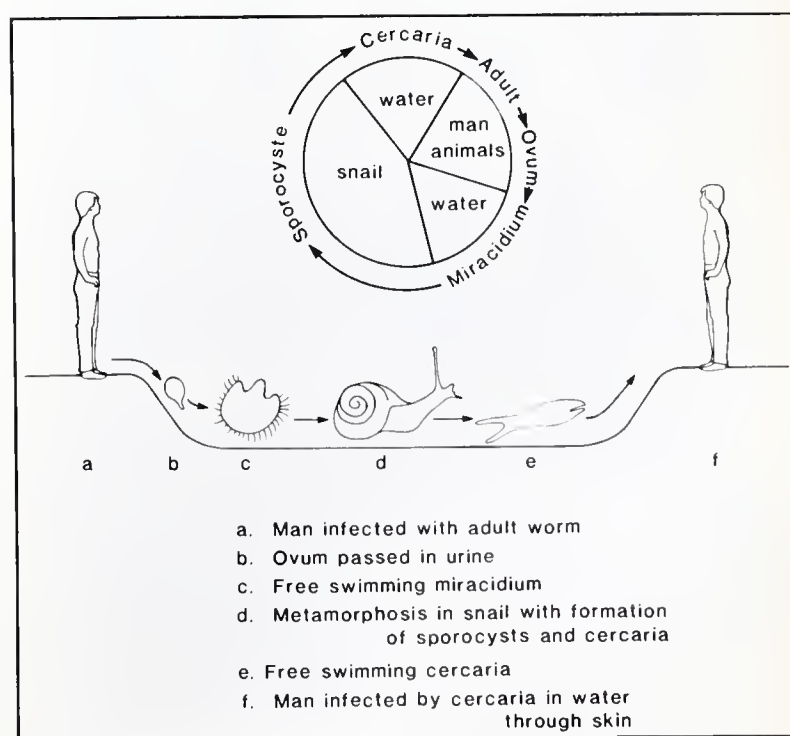


Figure 1. Life cycle of the *Schistoma* worm.

* John L. McClellan Memorial Veteran's Hospital, 4300 West Seventh Street, Little Rock, Arkansas 72205.

the particular snail where metamorphosis takes place and primary and secondary spirocytes are formed. This leads to cercaria swimming in the water which infect another person, and the worms grows to an adult stage, completing the cycle.

The female worm, carried by the male, migrates against the blood stream down the venous tributaries of the urinary system to lay its eggs in any part of the genitourinary system but primarily in the wall of the bladder and ureters. Some of the worms are trapped in the very fine tributaries but the majority return to their original place in the portal system. The spines on the eggs break through the mucosa and then the eggs, aided by the contraction of the bladder, find their way into the urine and are excreted. Deeply deposited eggs may lead to fibrosis as the body defends itself against simple mechanical irritation caused by a foreign body (the eggs) or as a result of a special toxin secreted by the miracidia and liberated to the surrounding tissues. Fibrosis may be the result of a combination of the two. No matter the cause, the result is severe fibrosis (depending on the severity of the initial infection and a variable period of time during which this hard, fibrous tissue is forming) in the organ.

Late complications or urinary schistosomiasis occur years after the patient had been exposed to the infection. The pathological lesion set off by the initial infection proceeds steadily and finally produces a galaxy of complications. Anti-bilharzial treatment plays little part in the prevention of complications, unless it is started early and before a great number of ova are deposited. Intradermal tests for specific allergy with schistosomal antigens are useful in diagnosis.

The intensity of the bladder inflammatory reaction in the usual case appears depends first upon the severity of the infestation and the number of ova deposited and secondly

upon the location of these ova internally or externally to the muscular layer of the bladder. Most of the deposits occur just under the epithelium. They are surrounded by round cells, eosinophils and the excessive fibrous tissue proliferation. When the ova are deposited deeper in the bladder wall, in the muscularis, they cannot find their way to the lumen. As these ova die the same intense fibrotic reaction previously mention takes place, and in time completely replaces the normal musculature. The ova are either entirely destroyed or become calcified, and when they are present in large numbers, reaction cast a typical find calcified opacity on x-ray film which delicately lines the walls of the bladder, ureter, etc. In most cases of chronic bilharzial cystitis, the bladder shows no appreciable size reduction; however, in about one percent of cases the capacity is decreased to 60 ml or less. The presence of bladder calcification on radiological examination does not necessitate the presents of symptoms and viceversa.

Bilharzial complications in the urinary tract produce non-specific symptoms. Terminal hematuria is a definite and diagnostic symptom when the worms are alive and the disease is in the acute phase. In the later advanced, and more complicated cases, the worms have long since been dead, the ova buried under mounds of fibrous tissue. The symptoms are those of an ulcer, cystitis, carcinoma or are due to an obstructed ureter and are seen in patients without bilharziasis. A biopsy of bladder tissue is probably the most valuable and the quickest diagnostic test. Numerous bilharzial ova, secondary malignant cells and papilloma formation are seen easily (Figs. 2 and 3).

In Iraq, urinary schistosomiasis has been an extraordinarily troublesome endemic disease affecting most of the population in an area of about two-thirds of the entire country.

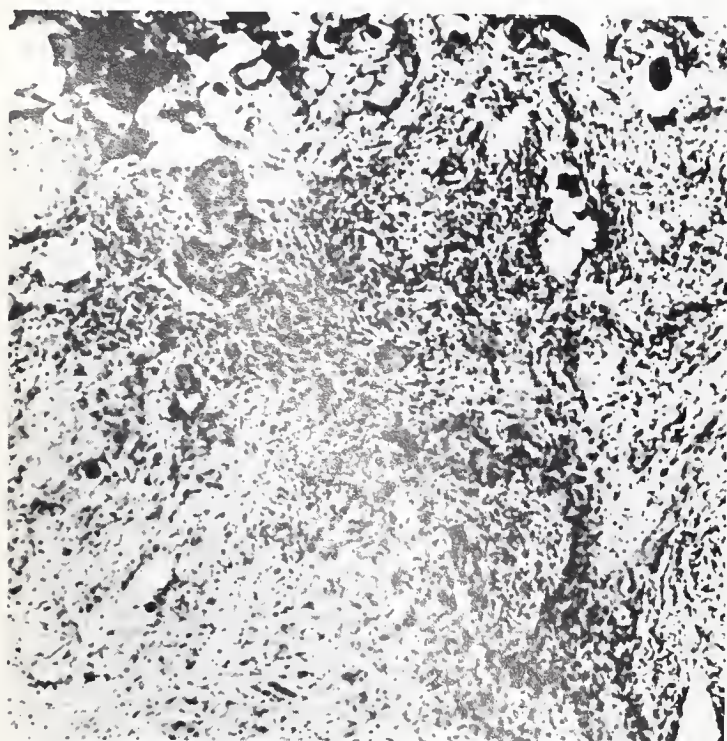


Figure 2. Carcinoma of the bladder, cancer cells and bilharzial ova.

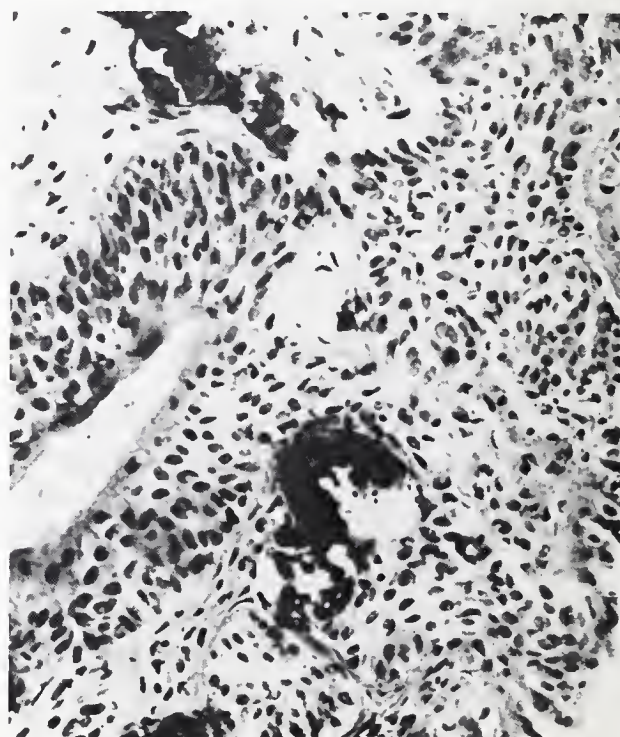


Figure 3. Bilharzial papilloma of the bladder. Dead and calcified ova can be seen.

The problem has continued to exist for more than 6,000 years. Vigorous efforts have been directed toward altering the disease during the past 20 years. These control measures have consisted of health education directed toward preventing water pollution by human excreta, snail control to eliminate the intermediate hosts and treatment of the patients. Significant changes have occurred as a result of these public health measures. In 1958, 39,493 students were examined and 8,165 cases of bilharziasis were found (20.6%). By 1980, the percentage had dropped to 1.5%, or 3,338 cases among 218,231 students examined.

Snail control has been particularly effective with infected streams being inspected. In 1980, 5,270 streams were inspected and only 80 (1.5%) were infected with the snails in the cycle. Almost 42% (588 of 1,404) of the streams inspected in 1958 were infected.

The actual number of cases of bilharziasis in Iraq has also dropped dramatically, from 6.2% in 1970 to 1.56% in 1979.

Most of the patients of Iraq and apparently most countries which are infected with bilharziasis are from the rural areas. Particularly in Iraq, the rice-growing farmers or those living in the marshy regions in the south of Iraq are infested. At the same time it is a well-known fact that schistosomiasis affects males more than females, reflecting social, occupational and cultural factors.

Materials and Methods

As an example of the experience of busy physicians dealing with this disease, we report our personal data from the hospitals and from the private clinics, keeping in mind that Baghdad, in general, is a referral center for the entire country and the reporting hospitals are two of the busiest in Baghdad. There were 1,520 cases of calcified bladders with a history of chronic bilharziasis haematobium seen by the first three authors during the last fifteen years (1965-1980). Ages of infected persons ranged from 25-45 years with a peak age of 35. There were 1,472 males and 48 females. The examination of the 1,520 patients included urine analysis, excretory pyelograms and cystoscopy.

Diagnostic Criteria

The symptoms of dysuria, frequency, nocturia and occasionally hematuria due to chronic bilharziasis were mainly due to bladder calcification, fibrosis and the presence of chronic bilharzial ulcers. The pathognomonic symptom was that of perineal pain, which often extended to the pubic area, the penis and/or the anus. These symptoms frequently become more aggravated by thirst and fatigue, and seemed to be relieved by drinking more fluids. Physical examination occasionally revealed slight or severe suprapubic tenderness. Urine examination often demonstrated white blood cells, red blood cells, and rarely, dead or live ova, if these latter bodies were searched out. Radiologically, bladder calcification in various amounts appears on the plain film, but usually there was no correlation between the severity of the symptoms and the degree of

DISTRIBUTION OF CASES ACCORDING TO THE RESULT OF TREATMENT

Results in %	Age Group in Years			
	25-29	30-34	35-39	40 & over
Cured	33.0	40.0	42.0	36.5
Recurred	33.3	31.9	33.3	36.1
Addicted	18.7	17.1	15.3	16.7
No Benefit	14.9	11.0	9.3	10.8

Table 1. Distribution of Cases According to the Result of Treatment.

calcification. Excretory urography, in most cases, revealed variable degrees of ureteral obstruction with or without upper urinary tract changes. These changes depend apparently upon the degree of ureteral wall invasion and the resultant contractual scarring of the ureter. Cystoscopically the bladder mucosa was always abnormal; it is very erythematous, due to foreign protein irritation, when the disease is active but may be pale with a noticeable degree of decreased vascularity and with area of calcification in more chronic disease. Single or multiple ulcers, usually from 0.5-1.0 cm in diameter, with undermined edges and a grayish avascular base, were seen. These did not seemingly bleed easily. The peripheral area was much more congested than the ulcer's base. These were truly trophic ulcers. Narrowing of one or both ureteral orifices might be encountered. Bilharzial papillomata, not infrequently the results of long-standing bilharzial bladder wall invasion and irritation, usually had a broad sessile base and were granulomatous in appearance by our assessment. This helped to make them readily distinguishable from the semi-transparent, delicately fronded non-bilharzial papillomate.

Bladder cancer associated with bilharziasis is of the squamous cell type. In our experience almost every single case of squamous cell carcinoma in Iraq was associated with a history of schistosomiasis. It has been reported in the British literature that 70% of bilharziasis cases end sometimes in squamous cell carcinoma, while squamous cell carcinoma accounts for 40% of the bladder carcinomas in the endemic areas, compared to 8% in the non-endemic areas. Spread occurs via the lymphatic channels and/or blood vessels. Because of chronic irritation and fibrosis, blockage occurs which had probably given enough explanation of why squamous cell with bilharziasis is much less aggressive with a tendency to remain localized with a very late metastasis than squamous cell carcinoma encountered without bilharziasis.

Results

On examining 1,472 male and 48 female patients we were unable to find any significant differences between them related

to age, symptoms, clinical and investigative findings.

Females comprised only 3.15% of the total number examined and 62% of the patients were between 30-39 years of age. The distribution of symptoms between the different age groups were fairly evenly divided. Of note was that 100% of the patients had perineal pain, including the females.

Blood analysis showed that 25.59% of the patients demonstrated white blood cells, 38.48% red blood cells, but only 9.14% exhibited bilharzial ova (dead or alive).

Cystoscopic findings were compiled for 412 cases. Calcification of the bladder was observed in 90.26%, solitary bladder ulcer in 37.1%, multiple ulcers in 5%, and narrowing or one or both ureteral orifices in 40.08% of the patients examined. We were unable to view the ureteral orifices in 26.21% of the cases. In only 9.22% (38 cases) were there bilharziomas or tumors..

Plain x-rays were done on all patients and the results were that 28.95% had mild calcification, 67.9% severe, but only 3.09% (47 cases) had a contracted bladder with a capacity of less than 80 cc.

Excretory urograms were performed in 1,094 cases (71.97% of the patients). Of those patients studied, 71.94% had unilateral or bilateral obstruction with or without calcification of the lower third of the ureter, 22.03% had an obvious or bilateral hydronephrosis, and 6.03% showed a non-functioning kidney due to marked hydronephrosis and renal failure due to ureteral stricture.

The diagnosis of schistosomiasis depends on a history of being in an endemic area, hematuria, bladder irritation symptoms, and perineal pain. Urine analysis, cystoscopy and bladder biopsy effect a definitive diagnosis.

Treatment

While most frequently the urine shows no bilharzial ova, patients almost always receive some symptomatic benefit from a course of antibilharzial treatment. The drug therapy is directed at killing the adult worms and may consist of organic antimonial preparations not commonly used these days. Most of these drugs are toxic with many side effects and the evidence is that patients require long and repeated courses of antimony; Etrinol (Hyanthone), 3mg/kg, body weight single dose IM; and Ambilhar (Niridazole), 1-(5-Nitro Thiazol) 2-Imidezolidinen p.o., 25 mg/kg body weight/day for 5-7 days.

Other chemotherapy or antibiotics were given according to urine culture and sensitivity tests to clear the second bacterial infection when present. A bladder mixture containing belladonna derivatives has been effective as a pain-relieving medication. This treatment is continued as long as the patient benefits from it, which can be for many months.

In 1964, the eradicating effect of Cantharidin upon bilharzial fibrosis and calcification was proven. Cantharidin is dried powder of the spanish fly which contains not less than 0.6% of cantharidin (the lactone of Cantharidin Acid, $C_{10}H_{12}O_4$). It is readily absorbable from the skin and mucous membranes and is excreted by the kidneys to produce the same local effects

upon the urothelium. The action of Cantharidin on bladder calcification is probably due to its local effects upon the bladder mucous membrane, producing a severe degree of hyperemia, which is accompanied by necrosis and shedding of the calcified mucous membrane. If it is given in drastically toxic doses, it is most effective.

Once the urothelium is sloughed it is replaced by regenerated urothelium, affording relief of symptoms. Since its certification, 5 minims (drops) of tincture cantharides is added to a bladder mixture, which is usually composed of sodium bicarbonate as an alkalinizer with tincture hyocysmus as an antispasmodic. RX: Sodium bicarbonate, 0.5 gm; Potassium citrate, 0.2 gm; Tincture hyoscayamus, 1-2 cc; Tincture canthridis, 0.3 cc; syrup Aurant., q.s.; Aqua menth, ad 15 cc; and 1 Tbl., p.o. tid.

Table 1 indicates that among 1,520 patients treated by this method, 38.2% were cured of their symptoms after one to three months of treatment, 33.42% became free of their symptoms only temporarily at first but responded to a subsequent course of medication, 16.78% were improved but required continuous medication to be free of symptoms, and 11.18% of the patients were treatment failures.

Unfortunately for patients not responding to these medications, surgery is the only remaining alternative for relief of symptoms. Surgical choices may include procedures to increase the bladder capacity as for example, ileocystoplasty and colcystoplasty. In some cases, because of an intolerable result from oral medication, the patient may require permanent diversion of the urine by ileal conduit or cutaneous ureterostomies.

Summary

With increased world travel the likelihood of Americans contracting schistosomiasis has increased and we believe American physicians should become familiar with the parasitology of *Schistosoma hematobium*, its clinical presentation, complications and treatment. As a basis of comparison, an Iraq experience of more than twenty years has been presented. Although the incidence is still high, with that country's improved public health measures, it has dropped from 6.2% in 1970 to 1.5% in 1979. The treatment of calcification and fibrosis by Cantheridine tincture is effective, but still the therapy is often surgical correction.

Acknowledgement

Dr. Arthur T. Evans, Professor and Director of Urology, University of Cincinnati, reviewed this manuscript and Carole Sanders provided technical assistance.

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Note: Additional figures and tables can be obtained from the author.

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Prevent recurrences month after month* **ZOVIRAX[®]** (acyclovir) **CAPSULES**

Brief Summary

INDICATIONS AND USAGE: Zovirax Capsules are indicated for the treatment of initial episodes and the management of recurrent episodes of genital herpes in certain patients.

The severity of disease is variable depending upon the immune status of the patient, the frequency and duration of episodes, and the degree of cutaneous or systemic involvement. These factors should determine patient management, which may include symptomatic support and counseling only, or the institution of specific therapy. The physical, emotional and psychosocial difficulties posed by herpes infections as well as the degree of debilitation, particularly in immunocompromised patients, are unique for each patient, and the physician should determine therapeutic alternatives based on his or her understanding of the individual patient's needs. Thus Zovirax Capsules are not appropriate in treating all genital herpes infections. The following guidelines may be useful in weighing the benefit/risk considerations in specific disease categories:

First Episodes (primary and nonprimary infections — commonly known as initial genital herpes):

Double-blind, placebo-controlled studies have demonstrated that orally administered Zovirax significantly reduced the duration of acute infection (detection of virus in lesions by tissue culture) and lesion healing. The duration of pain and new lesion formation was decreased in some patient groups. The promptness of initiation of therapy and/or the patient's prior exposure to Herpes simplex virus may influence the degree of benefit from therapy. Patients with mild disease may derive less benefit than those with more severe episodes. In patients with extremely severe episodes, in which prostration, central nervous system involvement, urinary retention or inability to take oral medication require hospitalization and more aggressive management, therapy may be best initiated with intravenous Zovirax.

Recurrent Episodes:

Double-blind, placebo-controlled studies in patients with frequent recurrences (6 or more episodes per year) have shown that Zovirax Capsules given for 4 to 6 months prevented or reduced the frequency and/or severity of recurrences in greater than 95% of patients. Clinical recurrences were prevented in 40 to 75% of patients. Some patients experienced increased severity of the first episode following cessation of therapy; the severity of subsequent episodes and the effect on the natural history of the disease are still under study.

The safety and efficacy of orally administered acyclovir in the suppression of frequent episodes of genital herpes have been established only for up to 6 months. Chronic suppressive therapy is most appropriate when, in the judgement of the physician, the benefits of such a regimen outweigh known or potential adverse effects. In general, Zovirax Capsules should not be used for the suppression of recurrent disease in mildly affected patients. Unanswered questions concerning the human relevance of *in vitro* mutagenicity studies and reproductive toxicity studies in animals given very high doses of acyclovir for short periods (see Carcinogenesis, Mutagenesis, Impairment of Fertility) should be borne in mind when designing long-term management for individual patients. Discussion of these issues with patients will provide them the opportunity to weigh the potential for toxicity against the severity of their disease. Thus, this regimen should be considered only for appropriate patients and only for six months until the results of ongoing studies allow a more precise evaluation of the benefit/risk assessment of prolonged therapy.

Limited studies have shown that there are certain patients for whom intermittent short-term treatment of recurrent episodes is effective. This

approach may be more appropriate than a suppressive regimen in patients with infrequent recurrences.

Immunocompromised patients with recurrent herpes infections can be treated with either intermittent or chronic suppressive therapy. Clinically significant resistance, although rare, is more likely to be seen with prolonged or repeated therapy in severely immunocompromised patients with active lesions.

CONTRAINDICATIONS: Zovirax Capsules are contraindicated for patients who develop hypersensitivity or intolerance to the components of the formulation.

WARNINGS: Zovirax Capsules are intended for oral ingestion only.

PRECAUTIONS: General: Zovirax has caused decreased spermatogenesis at high doses in some animals and mutagenesis in some acute studies at high concentrations of drug (see PRECAUTIONS — Carcinogenesis, Mutagenesis, Impairment of Fertility). The recommended dosage and length of treatment should not be exceeded (see DOSAGE AND ADMINISTRATION).

Exposure of Herpes simplex isolates to acyclovir *in vitro* can lead to the emergence of less sensitive viruses. The possibility of the appearance of less sensitive viruses in man must be borne in mind when treating patients. The relationship between the *in vitro* sensitivity of Herpes simplex virus to acyclovir and clinical response to therapy has yet to be established.

Because of the possibility that less sensitive virus may be selected in patients who are receiving acyclovir, all patients should be advised to take particular care to avoid potential transmission of virus if active lesions are present while they are on therapy. In severely immunocompromised patients, the physician should be aware that prolonged or repeated courses of acyclovir may result in selection of resistant viruses which may not fully respond to continued acyclovir therapy.

Drug Interactions: Co-administration of probenecid with intravenous acyclovir has been shown to increase the mean half-life and the area under the concentration-time curve. Urinary excretion and renal clearance were correspondingly reduced.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Acyclovir was tested in lifetime bioassays in rats and mice at single daily doses of 50, 150 and 450 mg/kg given by gavage. There was no statistically significant difference in the incidence of tumors between treated and control animals, nor did acyclovir shorten the latency of tumors. In 2 *in vitro* cell transformation assays, used to provide preliminary assessment of potential oncogenicity in advance of these more definitive life-time bioassays in rodents, conflicting results were obtained. Acyclovir was positive at the highest dose used in one system and the resulting morphologically transformed cells formed tumors when inoculated into immunosuppressed, syngeneic, weanling mice. Acyclovir was negative in another transformation system considered less sensitive.

In acute studies, there was an increase, not statistically significant, in the incidence of chromosomal damage at maximum tolerated parental doses of 100 mg/kg acyclovir in rats but not Chinese hamsters; higher doses of 500 and 1000 mg/kg were clastogenic in Chinese hamsters. In addition, no activity was found after 5 days dosing in a dominant lethal study in mice. In 6 of 11 microbial and mammalian cell assays, no evidence of mutagenicity was observed. At 3 loci in a Chinese hamster ovary cell line, the results were inconclusive. In 2 mammalian cell assays (human lymphocytes and L5178Y mouse lymphoma cells *in vitro*), positive responses for mutagenicity and chromosomal damage occurred, but only at concentrations at least 400 times the acyclovir plasma levels achieved in man.

Acyclovir has not been shown to impair fertility or reproduction in mice (450 mg/kg/day, p.o.) or in rats (25 mg/kg/day, s.c.). At 50 mg/kg/day s.c. in the rat, there was a statistically significant increase in post-implantation loss, but no concomitant decrease in litter size. In female rabbits treated subcutaneously with acyclovir subsequent to mating, there was a statistically significant decrease in implantation efficiency but no concomitant decrease in litter size at a dose of 50 mg/kg/day. No effect upon implantation efficiency was observed when the same dose was administered intravenously. In a rat peri- and postnatal study at 50 mg/kg/day s.c., there was a statistically significant decrease in the group mean numbers of corpora lutea, total implantation sites and live fetuses in the F₁ generation. Although not statistically significant,

there was also a dose related decrease in group mean numbers of live fetuses and implantation sites at 12.5 mg/kg/day and 25 mg/kg/day, s.c. The intravenous administration of 100 mg/kg/day, a dose known to cause obstructive nephropathy in rabbits, caused a significant increase in fetal resorptions and a corresponding decrease in litter size. However, at a maximum tolerated intravenous dose of 50 mg/kg/day in rabbits, there were no drug-related reproductive effects.

Intraperitoneal doses of 320 or 80 mg/kg/day acyclovir given to rats for 1 and 6 months, respectively, caused testicular atrophy. Testicular atrophy was persistent through the 4-week post-dose recovery phase after 320 mg/kg/day; some evidence of recovery of sperm production was evident 30 days postdose. Intravenous doses of 100 and 200 mg/kg/day acyclovir given to dogs for 31 days caused aspermatogenesis. Testicles were normal in dogs given 50 mg/kg/day, i.v. for one month.

Pregnancy: Teratogenic Effects: Pregnancy Category C. Acyclovir was not teratogenic in the mouse (450 mg/kg/day, p.o.), rat (50 mg/kg/day, s.c.) or rabbit (50 mg/kg/day, s.c. and i.v.). There are no adequate and well-controlled studies in pregnant women. Acyclovir should not be used during pregnancy unless the potential benefit justifies the potential risk to the fetus. Although acyclovir was not teratogenic in animal studies, the drug's potential for causing chromosome breaks at high concentration should be taken into consideration in making this determination.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when Zovirax is administered to a nursing woman. In nursing mothers, consideration should be given to not using acyclovir treatment or discontinuing breastfeeding.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS — Short-Term Administration: The most frequent adverse reactions reported during clinical trials were nausea and/or vomiting in 8 of 298 patient treatments (2.7%) and headache in 2 of 298 (0.6%). Less frequent adverse reactions, each of which occurred in 1 of 298 patient treatments (0.3%), included diarrhea, dizziness, anorexia, fatigue, edema, skin rash, leg pain, inguinal adenopathy, medication taste and sore throat.

Long-Term Administration: The most frequent adverse reactions reported in studies of daily therapy for 3 to 6 months were headache in 33 of 251 patients (13.1%), diarrhea in 22 of 251 (8.8%), nausea and/or vomiting in 20 of 251 (8.0%), vertigo in 9 of 251 (3.6%), and arthralgia in 9 of 251 (3.6%). Less frequent adverse reactions, each of which occurred in less than 3% of the 251 patients (see number of patients in parentheses), included skin rash (7), insomnia (4), fatigue (7), fever (4), palpitations (1), sore throat (2), superficial thrombophlebitis (1), muscle cramps (2), paronychia (1), menstrual abnormality (4), acne (3), lymphadenopathy (2), irritability (1), accelerated hair loss (1), and depression (1).

DOSAGE AND ADMINISTRATION: Treatment of initial genital herpes: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 10 days (total 50 capsules).

Chronic suppressive therapy for recurrent disease: One 200 mg capsule 3 times daily for up to 6 months. Some patients may require more drug, up to one 200 mg capsule 5 times daily for up to 6 months.

Intermittent Therapy: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 5 days (total 25 capsules). Therapy should be initiated at the earliest sign or symptom (prodrome) of recurrence.

Patients With Acute or Chronic Renal Impairment: One 200 mg capsule every 12 hours is recommended for patients with creatinine clearance ≤ 10 ml/min/1.73 m².

HOW SUPPLIED: Zovirax Capsules (blue, opaque) containing 200 mg acyclovir and printed with "Wellcome ZOVIRAX 200". Bottles of 100 (NDC-0081-0991-55) and unit dose pack of 100 (NDC-0081-0991-56).

Store at 15°-30°C (59°-86°F) and protect from light.

*In controlled studies, recurrences were totally prevented for 4 to 6 months in up to 75% of patients.



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Home Intravenous Antibiotic Therapy in Arkansas

Gene Graves, P.D.* , J. P. Jackson, M.D., Alan Maxwell, P.D., and Teresa Woods, R.N.

Intravenous antibiotic treatment of serious infections require patients to be hospitalized for up to six weeks after the acute phase of their illness. According to recent Blue Cross Blue Shield statistics, the average cost of this prolonged hospitalization in Arkansas is estimated to be \$17,010, or \$405 per day*. In addition to the cost, hospitalized patients receiving I.V. antibiotic therapy often feel that the hospital is a sterile and stressful environment.

Over the last ten years, there have been a number of studies published documenting the safety, effectiveness, convenience, and cost savings of home I.V. antibiotic therapy; however, only in recent years have home I.V. services become a part of the physician's prescribing arsenal. While the trend toward utilization of home I.V. antibiotic therapy is growing in Arkansas, physicians have been somewhat conservative in prescribing home I.V. therapy.

Since 1982, an Arkansas-based home I.V. and nutrition service has treated over 3,000 Arkansas patients. The home therapies were offered to patients state-wide and included: I.V. antibiotic, hyperalimentation (TPN), chemotherapy, fluid/electrolyte replacement, pain management, and enteral. To date, the results have been excellent. The purpose of this study is to review thirty-seven patients who received home antibiotic therapy.

Patients and Methods

Patients in this study were randomly selected from those referred to this company by Arkansas physicians. Home I.V. antibiotic patients must meet certain criteria before they can be accepted as a home candidate. Patients must be well enough to go home, except for a requirement of continued parenteral antibiotic administration. The patient or a family member must

have the mental and physical capacity to learn and perform the home I.V. procedures. And, finally, the patient or family member must possess the proper motivation to follow the procedures exactly as instructed.

The age range of the thirty-seven patients was from three to seventy-seven years. Patients or family members administered their own I.V. antibiotics by means of a heparin lock, subclavian catheter, Broviac catheter, or Hickman catheter. Complications were infrequent. Some patients were able to return to work while receiving therapy; others enjoyed the comfort of being at home. Cost reductions were substantial, calculated to an average of between \$2,790.65 to \$4,651.25 per patient. The duration of home I.V. antibiotic therapy averaged twenty-three days. Some patients were hospitalized less than a week before they continued their therapy at home, but several were hospitalized as long as a month before being discharged on home therapy.

Of the thirty-seven patients in this study, thirty-six were receiving I.V. antibiotic therapy in the hospital before being discharged on home therapy. Once the physicians referred the patient to the home I.V. service, the in-hospital training was initiated by a registered nurse. If the patient was trained by hospital personnel, such as a nutritional support team, the care was coordinated between the I.V. service nurses and a member of the team. Patients or family members were taught by one-on-one demonstration. Procedures covered included aseptic technique, catheter care, I.V. administration, and proper storage of medications. Before discharge, the patient demonstrated several times their proficiency in these procedures. In addition, each patient received a concise, easy-to-read home I.V. antibiotic procedure manual. Patients were instructed about side effects of the drug and possible complications involving the catheter, and warned to stop the dose and to telephone anytime a question occurred. A nurse or pharmacist was on call twenty-four hours a day. Only one patient was not hospitalized when therapy was initiated. Training for this patient followed the above guidelines, but was performed at home.

Note: More recent figures on daily hospital charges were released by the Arkansas Hospital Association and show that the average charge for hospitals in Arkansas is now \$546 per day.

*I Care of Arkansas, Inc., Freeway Medical Towers, 5810 West Tenth, Little Rock, Arkansas 72204

No limitations were placed on patient activity, although those patients with peripheral heparin locks were asked to refrain from physical activity requiring considerable use of the arm in which the heparin lock was located. Some patients were able to work while receiving I.V. antibiotic therapy.

Osteomyelitis was treated in eleven instances; wound infection in ten, bacterial endocarditis in three, septic arthritis in one, otitis media in one, urinary tract infection in one, pneumonia in one, meningitis in two, brain abscess in one, gangrenous appendix in one, septicemia in one, infected lymph nodes in one, pleurisy in one, sinusitis in one, and hemophilus influenza in one.

The antibiotics use at home included Nafcillin, Tobramycin, Vancomycin, Ticarcillin, Pipracillin, Azlocillin, Mezlin, Penicillin G, Cefazolin, Gentamycin, Claforan, Carbenicillin, Ampicillin, Amikacin, Mandol, Cleocin, Monocid, Keflin, and Netromycin. Serum urea nitrogen and creatinine levels were monitored in patients treated with aminoglycosides, but in no case did it require the therapy to be discontinued because of an increase in these values.

Drugs and Supplies

Intravenous antibiotic solutions were compounded using sterile technique in a "state of the art" class 100 laminar flow room, employing a six foot horizontal laminar flow hood. Pharmacists adhered to a strict aseptic protocol that included gown out procedure as well as daily bacteriological culturing for quality control.

All drugs, supplies, and equipment were regularly delivered to the patients' homes before they were needed. Usually, a week's supply of the I.V. antibiotic solutions were compounded and delivered at a time. Based on manufacturers stability studies, freezing prolongs the stability of many I.V. antibiotics. When I.V. antibiotics were frozen, the patient was told to take the I.V. antibiotic solution out of the freezer and refrigerator for twenty-four hours before it was needed, and then allow it to warm at room temperature before use.

Supplies were inventoried weekly to avoid oversupply. All supplies are sterile pre-packaged and for one-time use only. Intravenous administration sets contained an in-line 0.22 micron filter. Administration sets were discarded every twenty-four hours. A new needle was attached to the administration set at the time each new bag was to be administered.

Protocol

A registered nurse made periodic home visits to check the patient's progress. In addition, the nurse would reinforce training procedures, replace heparin locks, draw blood if necessary, and assist patients with problems. A progress report, assessing the patient's condition, was forwarded to the physician on a timely basis. Patients receiving aminoglycosides required more frequent blood testing. Patients were seen by their physician an average of every two weeks.

Complications

Drug rashes occurred in two patients taking Nafcillin.

Mild diarrhea developed in one patient receiving Mandol. There were no reports of infected catheters from any patients with central venous catheters or peripheral heparin locks. No serious complications were documented.

Cost Analysis

Patients were only charged for the drugs, supplies, and equipment they received during the course of their therapy. In some cases, a home nursing visit charge was made for replacement of the heparin lock or for a routine patient evaluation. Charges were not made for patient training sessions or after hour calls. The cost of the antibiotic therapy varied widely, depending on the drug chosen and the length of therapy.

The thirty-seven patients were treated at home for a total of 851 days, the average patient requiring treatment for twenty-three days. The total cost of 851 days of home I.V. antibiotic therapy for these thirty-seven patients was \$172,558; however, if these thirty-seven patients had remained in Arkansas hospitals for 851 days, according to 1984 Blue Cross Blue Shield statistics, the cost of their hospitalization would have been \$344,655, or 50% higher.

Using a different methodology for estimating the hospital charges for I.V. antibiotic therapy, the semi-private room charges for three major hospitals in Little Rock were averaged, resulting in \$170.33 per day. The individual hospital charges for the antibiotics were calculated using hospital charge records when available. After tabulating the average hospital semi-private room (\$170.33 x 851 patient days), plus the hospital charge for the I.V. antibiotics used to treat those thirty-seven patients, the total estimate of hospital charges was \$275,813. This estimate of hospital charges contains the I.V. antibiotic and semi-private room charge only. It does not contain other hospital pharmacy charges for heparin, sodium chloride injection, or other drugs, nor does it contain I.V. administration supplies, catheter care supplies, laboratory charges, or miscellaneous hospital charges. While this estimate of hospital charges is obviously low, for comparison purposes, it is still 38% higher than home I.V. antibiotic therapy.

If the Blue Cross Blue Shield statistics of average hospital charge is used, a savings of \$4,651 per patient is achieved by allowing the patient to receive his I.V. antibiotic therapy at home. If the ultra conservative estimate of hospital charges is used, the average home I.V. antibiotic patient will save approximately \$2,790. The home therapy savings documented in this report does not include other savings that the patient or family members achieved due to eliminating travel, meal, and lodging expenses when visiting the hospital. Also, this study does not include the savings achieved when patients were able to return to work while they receive their therapy at home.

Insurance Coverage

The private insurance companies were very receptive to paying for home I.V. antibiotic therapy, especially when they were made aware that it was an alternative to hospitalization. In some cases, the insurance companies paid only 80% of the

cost of outpatient treatment, but would have paid 100% of hospitalization. Obviously, this penalized the patient for going home early on I.V. therapy and for saving the insurance company money. Contact has been made with these insurance companies in an effort to encourage them to update their outpatient treatment policies. Unfortunately, Medicare and Medicaid do not pay for home I.V. antibiotic therapy at this time, but there is legislation before Congress to authorize payment for this type of treatment. To date, no action has been taken.

Comment

Serious infections frequently require long, expensive hospital stays, occupying acute care beds long after a patient had ceased to require that level of care except for I.V. drug administration. Home I.V. antibiotic therapy offers a significantly less expensive alternative for many people, and also allows patients to enjoy the convenience of their own homes. The response to the program has been overwhelmingly

favorable. Each patient was sent an evaluation form to complete at the conclusion of their therapy. Each patient in this study who returned a completed evaluation form, stated they would recommend home I.V. therapy to other patients. It was concluded that home I.V. antibiotic therapy is safe, effective, convenient, and cost-effective if patients are screened at the onset, and appropriate monitoring is conducted. Moreover, it offers a more comfortable and productive alternative to patients, many of whom are able to return to their jobs or school.

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ELECTROCARDIOGRAM OF THE MONTH

William C. Roberts, M.D.
John W. Watson, M.D.
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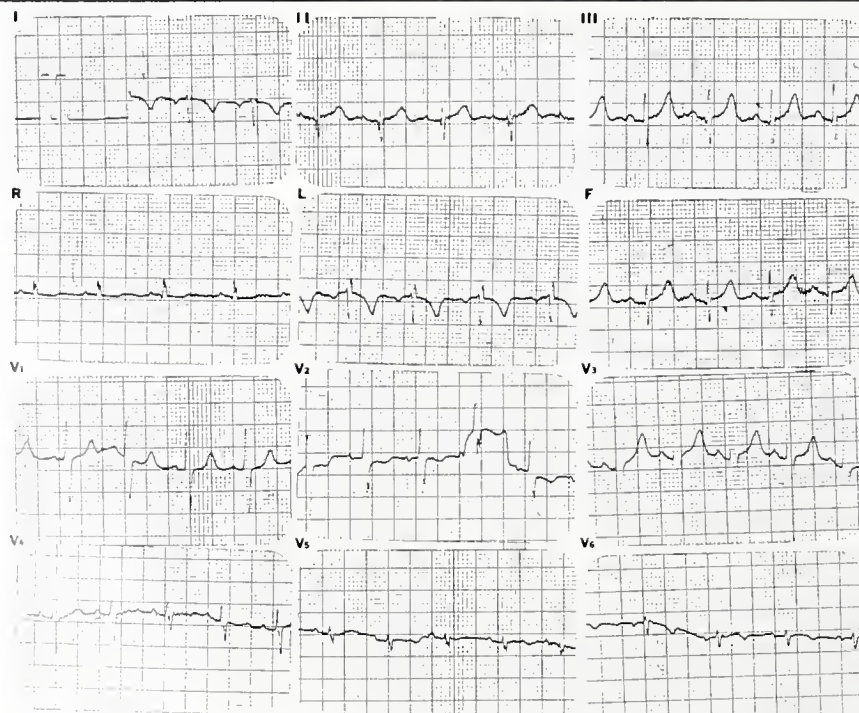
CLINICAL HISTORY:

R. M. is a 30-year-old man with pain over his sinus areas and a chronic, productive cough, presenting for evaluation. His physical examination shows his point of maximal cardiac impulse to be on the right side of his chest. His ECG is shown. What do you think?

DISCUSSION:

The P wave, QRS complex, and T-wave are all inverted in lead I. AVR and AVL are the reverse of normal. These findings are compatible with dextrocardia. This patient proved to have sinusitis, bronchiectasis, dextrocardia, and abdominal situs inversus, findings compatible with Kartagener's syndrome.

The feature editor wishes to thank Dr. Roberts of Conway, Arkansas for his assistance to this month's feature.



Pathogenesis, Evaluation and Therapy of Hyperlipidemia

Richard M. Jordan, M.D.*

New information has elucidated pathogenic events leading to atherosclerosis. Much of this progress comes from an understanding of lipid metabolism at the cellular level.¹ Recent studies also give strong support that treatment of hypercholesterolemia reduces the progression of atherosclerosis and new agents are becoming available which are effective in treating hyperlipidemia. This review discusses these aspects of atherosclerosis and an approach to the evaluation of hyperlipidemia.

Pathogenesis of Atherosclerosis

Recent concepts of atherosclerosis suggests that endothelial injury in an important early event in its pathogenesis.² One mechanism of damage is by change in membrane viscosity with alterations of cell junctions caused by excess LDL binding. These changes are thought to lead to subendothelial migration of monocytes and subsequent release of growth factors. This is followed by macrophage movement to subendothelial areas and engulfment of cholesterol with foam cell formation. This causes release of chemo-attractants and mitogens resulting in smooth muscle proliferation. Thus, all the elements of atheroma formation are then in place. Injury to endothelium can also occur from hypertension (cigarette smoking?) and subsequent platelet attachment with release of platelet-derived growth factor (PDGF). PDGF is capable of causing smooth muscle proliferation and possible atheroma formation.

Lipid Metabolism

Plasma triglycerides are derived from two sources, dietary fat and triglyceride synthesized from the liver. Long chain triglycerides in the gut are transformed into large, triglyceride-rich particles called chylomicrons by the intestinal mucosa cells and then enter the circulation via lymphatic drainage by the thoracic duct. Shorter chain triglycerides and free fatty acids are absorbed directly into the portal blood. Endogenously derived triglycerides are synthesized in the liver from carbohydrates or excessive quantities of circulatory free fatty acids. The hepatic secretory product, also rich in triglycerides, is called very-low-density lipoprotein, or VLDL. Both chylomicrons and VLDL are packaged with a coat of protein, phospholipids and unesterified cholesterol.

The ultimate fate of the triglyceride in chylomicrons and VLDL is the same - storage in adipose tissue. In order for this

process to occur, the triglyceride in both products must be hydrolyzed to free fatty acids and monoglycerides by the enzyme, lipoprotein lipase. This enzyme is found in the capillary endothelium of adipose tissue and the heart. By action of lipoprotein lipase, chylomicrons and VLDL are progressively delipidated and converted to short-lived, remnant particles that are depleted in triglycerides but enriched with cholesterol. The chylomicron remnant is quickly metabolized by the liver whereas the VLDL remnant (sometimes called intermediate density lipoprotein or IDL) undergoes additional transformation to form the major cholesterol-containing particle in blood, the low-density lipoprotein (LDL).

Most cells have surface receptors capable of binding LDL once LDL is internalized and bound with a lysosome. The LDL cholesterol esters are then hydrolyzed to free cholesterol which can subsequently be utilized for membrane synthesis or steroid hormone formation. The liberated cholesterol regulates intracellular enzyme acyl CoA:cholesterol acyltransferase (ACAT) which re-esterifies cholesterol for intracellular storage. Free cholesterol also inhibits synthesis of new LDL receptors and the rate limiting enzyme for endogenous cholesterol synthesis.

Not all LDL is catabolized by this LDL pathway. A relatively fixed amount of the total plasma LDL is removed from blood by scavenger cells, some of which reside in the vascular endothelium. Overloading of the scavenger pathway by excessive dietary cholesterol may be involved in the development of atherosclerosis.

Mechanisms also exist for the removal of free cholesterol from the cell. A tremendous amount of recent interest has focused upon the capacity of high density lipoprotein (HDL) to act as receptors for free cholesterol and a possible protective mechanism against the development of atherosclerosis. Free cholesterol is converted to cholesterol ester at the cell membrane by the enzyme lecithin:cholesterol acyltransferase (LCAT). The cholesterol ester is then either transformed from

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HLD to VLDL and LDL or converted by the liver to bile salts.

Lipoprotein Typing

A classification system utilizing the lipoprotein pattern of plasma separated by ultracentrifugation is: Type I - Fasting chylomicronemia; Type IIa - increased LDL only; Type IIb - increased LDL and increased VLDL; Type III - presence of remnant particle (IDL); Type IV - increased VLDL only; and Type V - increased fasting chylomicronemia and increased VLDL.

Such a typing system is useful for classification of genetic hyperlipidemic disorders and for therapeutic purposes. Use of ultracentrifugation or paper electrophoresis to accomplish this, however, is almost never necessary. It is usually sufficient to simply determine the plasma cholesterol and triglyceride, and clinically assess the patient. Most of the total fasting cholesterol (which should be less than 220mg%) measured clinically is made up of LDL. Smaller fractions are contributed by HDL (approximately 45mg%) and the cholesterol in VLDL (approximately 1/5 of the total triglycerides). A close approximation of the plasma LDL concentration (normal values should be 170 mg% or less) can be made by the formula LDL below:

$$\text{LDL} = \text{total cholesterol} - \frac{(\text{triglycerides} + 45)}{5}$$

This formula becomes less useful when the triglyceride concentration exceeds 400mg%.

Chylomicrons are normally completely cleared from plasma after twelve hours of fasting. Therefore, a fasting triglyceride determination should measure only VLDL. Normal values should be 200 mg% or less. When the blood VLDL concentration exceeds 250-300 mg/dl, the plasma will become turbid after overnight incubation in a refrigerator. If chylomicronemia is present in fasting plasma, they will appear as a creamy layer floating on the surface of plasma. When fasting chylomicronemia is present, the plasma triglyceride concentration has exceeded 1000mg%. Thus, measurement of the plasma triglyceride and cholesterol coupled with the appearance of plasma after overnight incubation in cold will allow separation of most of the lipoprotein patterns as shown in Table I.

As is apparent, Type III (remnant disease) cannot be reliably distinguished from Types IIb and IV. This is not a particularly great problem since Type III is only infrequently encountered and the treatment for III and IV is similar. If a Type III is present, the cholesterol and triglyceride will commonly be found in a 1:1 ratio, with both being approximately 300-400mg%. In most instances the clinician does not even need to know the appearance of the plasma to type a patient.

Genetic Hyperlipidemias

These entities appear to be much more common than previously realized. An understanding of the underlying pathophysiology is clearly helpful for diagnosis and individualized approaches to therapy.³

Familial Monogenetic Hypercholesterolemia

A single allelic mutant is responsible for this disease and its frequency is one in five hundred Caucasians. The disorder results from defective or absent LDL binding to their cellular receptors. The consequence is that heterozygotic individuals require a 2-3-fold increase of plasma cholesterol to suppress endogenous cholesterol synthesis to normal. Heterozygotes have cholesterol levels that range from 250 to 550mg%. In heterozygotes there is a diminished receptor binding that little or no cholesterol is internalized; therefore, cholesterol synthesis occurs at a greatly increased rate despite a strikingly elevated plasma cholesterol concentration (600 - 2000mg%). Clinical manifestations include corneal arcus, xanthomas, tuberous xanthomas, and tendon xanthomas of the achilles tendon and extensor tendons of the hand. Some patients experience polyarthritis, most commonly involving the ankles and knees. Premature vascular disease is the most common cause of death. Mean age of patients with ischemic heart disease in heterozygotes is forty-three years for men and fifty-three years for women. Onset of coronary disease in homozygotes is between the ages of ten to twenty years.

Polygenic Hypercholesterolemia

In patients with this disorder, more than one gene is responsible for the hypercholesterolemia. Hypercholesterolemia is present in ten percent or less of family members. Affected individuals do not have tendonous or tuberous xanthomas but are at risk for premature vascular disease.

Table I

Cholesterol	Triglyceride	Appearance of Plasma	Type
Normal or ↑	> 1000mg%	Milky surface; plasma clear	I
↑	Normal	Plasma clear	IIa
↑	200-400 mg%	Plasma turbid	IIb, III, IV
↑	400-1000mg%	Plasma turbid	III, IV
↑	> 1000mg%	Milky surface; plasma turbid	IV, V

Familial Triglyceridemia

The gene frequency of this autosomal dominant disorder is one percent. An important feature to recognize in regard to family screening studies is that the hypertriglyceridemia is not expressed in many individuals until early adulthood. Patients will have a Type IV pattern or occasionally a Type V. Typically, the plasma triglyceride concentration is 200-500mg%. Eruptive xanthomas can occur when the triglyceride level exceeds 1500 mg%. Mild glucose intolerance, obesity and hyperuricemia are frequently seen. Obesity, excessive carbohydrate ingestion, pregnancy, estrogen therapy and moderate ethanol intake can exacerbate the hypertriglyceridemia. It is not clear whether there is an increased risk of vascular disease but if present, it appears to be small.

Familial Combined Hyperlipidemia

In this autosomal dominant hyperlipidemia, one-third of patients have increased VLDL and LDL (Type IIb), one-third have only elevated LDL (Type II), and one-third have only increased VLDL (Type IV). Similar to familial hypertriglyceridemia the disease is not always expressed until early adulthood. Factors previously noted to exacerbate familial hypertriglyceridemia cause the same phenomena in this disorder. Unlike familial hypertriglyceridemia, patients with combined hyperlipidemia are at increased risk for vascular disease.

Familial Dysbetalipoproteinemia

This uncommon autosomal dominant disorder is characterized by an accumulation of the cholesterol-rich remnant particles that have an unusual mobility and appear as a broad beta band (Type III pattern) by paper electrophoresis. Recent studies have demonstrated that patients have a total absence of apoprotein E-III. Total apoE proteins, however, are elevated since other apoprotein E variants (especially apoprotein EII) are present. An unusual form of cutaneous lipid deposition is seen in 65% of patients with this disorder called "xanthoma striata palmaris" (xanthomas occurring in the creases of the digits and palms). When present in a patient without biliary cirrhosis, this finding is virtually pathognomonic of familial dysbetalipoproteinemia. Tuberos, and infrequently tendinous, xanthomas are present. Coronary intolerance and obesity are present in 50%. Very mild hypothyroidism can exacerbate the hyperlipidemia.

Lipoprotein Lipase Deficiency

This rare autosomal recessive disorder results from a deficiency of the enzyme lipoprotein lipase or apolipoprotein C-II. As a consequence, chylomicrons and VLDL accumulate causing greatly elevated plasma triglyceride levels. Eruptive xanthomas and lipemia retinalis occur when triglyceride levels are greatly elevated. Lipid deposition results in hepatosplenomegaly. Recurrent attacks of abdominal pain associated with rigidity, rebound tenderness, fever and leukocytosis are usually due to pancreatitis. The diagnosis of pancreatitis can be difficult since lipemia interferes with amylase determinations. Pregnancy and estrogen will exacerbate this disease. Prema-

ture vascular disease does not occur.

Secondary Hyperlipidemia

Secondary hyperlipidemia needs always to be considered in the evaluation of a hyperlipidemic patient. The more common disorders are briefly discussed.

Diabetes Mellitus

Insulin deficiency results in diminished lipoprotein lipase activity which in turn allows accumulation of chylomicrons and VLDL. Insulin lack also increases mobilization of free fatty acids, part of which results in increased VLDL synthesis. Thus, both overproduction and decreased clearance are present. In obese, nonketosis-prone diabetics, hyperinsulinism may have an effect to increase VLDL synthesis by the liver. Insulin therapy corrects the abnormality in insulin-dependent diabetes. Weight loss and diet are curative in obesity with hyperinsulinism.

Alcohol

Alcohol blocks oxidation of free fatty acids to CO₂, resulting in excessive amounts available for VLDL synthesis. Individuals already afflicted by hypertriglyceridemia are very sensitive to the hyperlipidemic effect of alcohol. This is a very common entity and is frequently overlooked by the physician. (Avoidance of alcohol is effective therapy.) Alcohol increases the blood HDL-3 concentration. Interestingly, HDL-2 seems to be the species that confers protection against vascular disease.

Estrogen-related Hyperlipidemia

Estrogens increase VLDL synthesis and impair lipoprotein lipase activity. The latter phenomenon is especially prominent in patients with pre-existing hyperlipidemia.

Renal Disease

Chronic renal failure causes accumulation of VLDL due to diminished lipoprotein lipase activity. In transplanted individuals there appears to be a stimulation of VLDL synthesis. Glucocorticoids used for immunosuppression probably are important in maintaining hyperlipidemia. Mild nephrotic syndrome is associated with hypercholesterolemia. This presumably is secondary to a generalized overproduction of protein including LDL. As nephrotic syndrome progresses, hypertriglyceridemia predominates.

Hypothyroidism

The increased cholesterol concentration in hypothyroidism results from accumulation of remnant particles and LDL. Catabolism of both products is depressed.

Evidence that Lowering Cholesterol Blood Levels Reduces the Risk of Coronary Disease

There is almost universal agreement that hypercholesterolemia is a risk factor predisposing to the development of vascular disease. It is less well accepted that lowering

a given patient's blood cholesterol concentration will also reduce that person's risk of vascular disease (the lipid hypothesis). Recent evidence, however, implies that the lipid hypothesis is valid. The Lipid Research Clinic, in a seven-year, four-month study, demonstrated with a population of asymptomatic hypercholesterolemic men who dieted and took cholestyramine, reduced cholesterol and LDL levels by 13.4% and 20.3%, respectively. There was a subsequent 24% decline in mortality from coronary heart disease and a 19% reduced incidence of nonfatal myocardial infarction as compared to a control population.⁴ Another large study demonstrated that hypercholesterolemic men treated with diet and cholestyramine for five years had less progression of coronary artery disease as assessed by coronary angiography from 49% (28/57) in the placebo group as compared to 32% (19/59) in the cholestyramine group.⁵ In a related study, this reduced progression was related to changes in HDL, LDL, and total cholesterol.⁶ The WHO study also found a lower incidence of nonfatal myocardial infarction in patients whose cholesterol was lowered by clofibrate.⁷ This study also showed a higher mortality from noncardiac causes including cancer in the group treated with clofibrate, raising concern that lowering the cholesterol increased cancer risk. A follow-up study, however, demonstrated that the higher mortality was primarily in clofibrate "nonresponders" whose cholesterol levels changed minimally during the study.⁸ In general, there is a direct, rather than indirect, relationship between cholesterol and cancer mortality.⁹

When the cholesterol exceeds the 220 and 250 mg% range, the risk of vascular disease becomes excessive. Thus, when this level is reached, intervention with diet and, if necessary, medication should be started.

Is Hypertriglyceridemia a Risk Factor for Development of Cardiovascular Disease?

There is considerable controversy as to whether or not hypertriglyceridemia predisposes to vascular disease.¹¹ That a causal relationship exists is suggested by the following findings. Elevated triglyceride levels are associated with a reduced HDL concentration. As noted earlier, HDL likely protects against development of vascular disease. Also, many disorders that predispose to vascular disease (diabetes mellitus, obesity, renal failure) also cause hypertriglyceridemia. Familial combined hyperlipidemia, in which many patients have elevated triglyceride levels, is strongly associated with vascular disease. Despite these links to vascular disease, however, most population studies do not support that hypertriglyceridemia is an independent risk factor when obesity, HDL levels, cigarette smoking, diabetes mellitus and cholesterol levels are also considered. Also, there is a surprising finding that familial hypertriglyceridemia (a different disorder from familial combined hyperlipidemia) does not predispose to premature atherosclerosis. This issue may have been partially clarified by the recent finding that those patients with hypertriglyceridemia at risk for vascular disease also have elevated levels of LDL B

protein levels.¹¹ The higher LDL B protein levels are not necessarily associated with high cholesterol levels. Hypertriglyceridemic patients with normal LDL B protein levels are not seemingly predisposed to vascular disease.

Although some questions remain regarding the role of triglyceride in the pathogenesis of atherosclerosis, it is clear that as the level of triglyceride approaches 1000mg%, patients are at risk of developing abdominal pain, pancreatitis and eruptive xanthoma. Thus, vigorous dietary and pharmacologic therapy should be instituted when the triglyceride level exceeds 500mg%. Levels that range between 250 and 500mg% are somewhat problematic. If the patient had a genetic disorder predisposing to hypertriglyceridemia (familial combined hyperlipidemia or dysbetalipoproteinemia but not familial hypertriglyceridemia) efforts should be made to reduce the triglyceride level. Weight loss should be encouraged if obesity is present and diabetes treated if it coexists. Estrogens should be discontinued and alcohol intake curtailed if either is being taken. If none of the above factors are found, however, there is no compelling evidence to treat triglyceride levels in this range.¹¹

Diet

Diet remains the cornerstone of therapy of most hyperlipoproteinemias and should be attempted prior to any pharmacologic intervention. The hypertriglyceridemia (mostly chylomicrons) of lipoprotein lipase deficiency is worsened by dietary fat. The simple relationship between chylomicronemia and fat ingestion make treatment obvious - restrict dietary fat. Thus, the diet should contain only 25-35 grams of fat without restriction of protein or carbohydrate. Medium chain triglycerides are absorbed in the portal blood and do not appear as chylomicrons. Medium chain triglycerides can therefore be used to supplement an affected patient's diet. At present, diet is the only treatment for lipoprotein lipase deficiency or apoprotein C-II deficiency.

In general, most other types of hyperlipoproteinemia syndromes will respond to a hypocaloric diet low in saturated fats and containing less than 300 mg of cholesterol. Maintenance of ideal body weight is essential for patients with hypertriglyceridemia. Occasional patients with excessive VLDL are very sensitive to carbohydrate ingestion which can cause a marked increase of plasma triglycerides. If such a patient remains hypertriglyceridemic after ideal body weight is achieved, then carbohydrate intake should be limited. Although dietary cholesterol restriction is important in the treatment of familial hypercholesterolemia, it is rarely sufficient alone. Diet, however, may result in a fifteen to twenty percent fall in cholesterol.

Drug Therapy

Cholestyramine is a bile-acid sequestering agent that appears to lower plasma cholesterol by increasing fecal loss of cholesterol. It is the drug of choice for familial hypercholesterolemia. It is not effective for treating hypertriglyc-

eridemia. Cholesterol levels usually decrease by an additional twenty to twenty-five percent over and above the effect of diet. Dosage is 16-24 grams/day, divided into four doses. Most common side effects are constipation, bloating and excessive gas production. Pancreatitis and calcification of the abdominal viscera are rare complications. Absorption of drugs such as thyroxine, digoxin, coumandin, thiazides, phenylbutazone, phenobarbital and antibiotics is decreased. Medications should be given one hour prior to cholestyramine.

Colestipal is also a bile-acid sequestering agent. It does not lower triglyceride levels. Its advantages over cholestyramine are that it can be taken twice a day (20 grams in divided doses) and seems to cause fewer gastrointestinal side effects.

Nicotinic acid (niacin) is an important hypolipidemic agent which decreases both cholesterol (LDL) and VLDL synthesis. Hypercholesterolemic patients who do not adequately respond to diet and cholestyramine should be treated with this drug. Hypertriglyceridemic patients will respond to niacin. Some authorities would use niacin as the drug of choice for the treatment of hypertriglyceridemia (Type IV) if it appears drug therapy is indicated. Niacin is especially effective in the Type V patient. However, its use is limited by its side effects. Most common are cutaneous flushing, increased pigmentation, dryness of the skin, abdominal pain, nausea and diarrhea. Peptic ulcer disease can be aggravated. Hepatic dysfunction with jaundice is a serious complication. Also, hyperuricemia and glucose tolerance can be worsened. The initial dosage is 1 gram/day, increasing over three days to 3 grams/day in three divided doses.

Gemfibrozil is a newer agent similar to clofibrate. This agent decreases VLDL synthesis and enhances lipoprotein lipase activity. LDL levels fall moderately and HDL is increased. This agent does not make the bile as lithogenic as clofibrate. Gemfibrozil may cause myositis and this complication is more likely to occur in patients with liver or kidney disease. In general, gemfibrozil has replaced clofibrate as the initial drug of choice for therapy of hypertriglyceridemia and dysbetalipoproteinemia.

Clofibrate (Atromid-S) is primarily useful in patients with endogenous hypertriglyceridemia (Types II, IV or V). It has little hypocholesterolemic effect. This is surprising since it apparently decreases VLDL synthesis (LDL-cholesterol appears to be derived from VLDL). It is useful for broad beta disease (Type III). Side effects are generally mild, and most common are abdominal discomfort and nausea. Decreased libido and breast tenderness occur in men. There also appears to be an increase in the incidence of gallbladder disease, pulmonary emboli, angina, claudication and cardiac arrhythmias. A myositis-like syndrome with an elevated serum CPK had been described as arthralgia. Clofibrate is also known to potentiate warfarin family anticoagulant medications, probably by displacing it from a protein carrier. Interestingly, clofibrate also has an effect to decrease platelet adhesiveness. Patients with renal insufficiency are particularly prone to

develop toxicity to clofibrate. Its disappearance from blood is delayed up to seven times in uremic patients. Clofibrate has received increasing amounts of adverse publicity because of the increased mortality (neoplasia and gallbladder disease) of a large group of men receiving the medication to lower the serum cholesterol. Although the incidence of nonfatal coronary events was reduced, the number of fatal coronary events was not. Clofibrate should not be used for therapy of hypercholesterolemia. The dosage is 2 grams/day in four divided doses in patients without renal disease.

Probucol is an agent that primarily lowers the cholesterol. Its mode of action is unknown. A decrease in serum cholesterol of approximately 10-20% can be expected with this drug. Side effects are few. Gastrointestinal symptoms of diarrhea, flatulence and abdominal pain are the most common. Dosage is 500mg twice daily.

Para-aminosalicylic acid (PAS-c) had been used to lower cholesterol and triglycerides in patients with Type IIa or IIb lipoprotein patterns. Its mechanism of action is not known. Most common side effects are nausea, vomiting and diarrhea. Hypersensitivity reactions of fever, skin eruption, malaise, leukopenia, jaundice and hemolytic anemia are fortunately rare. Goiter can also occur. Dosage is 8 grams/day in four divided doses. It is not yet approved by the FDA for therapy of the hyperlipoproteinemias.

Two experimental drugs, *compactin* and *mevinolin*, appear to be effective in lowering cholesterol, especially when combined with conventional bile acid-binding resins. Compactin and mevinolin both block cholesterol production by inhibiting the rate limiting enzyme for cholesterol synthesis, HMG-CoA reductase. This then increases LDL removal via receptor-mediated mechanisms.

Other Treatment Modalities

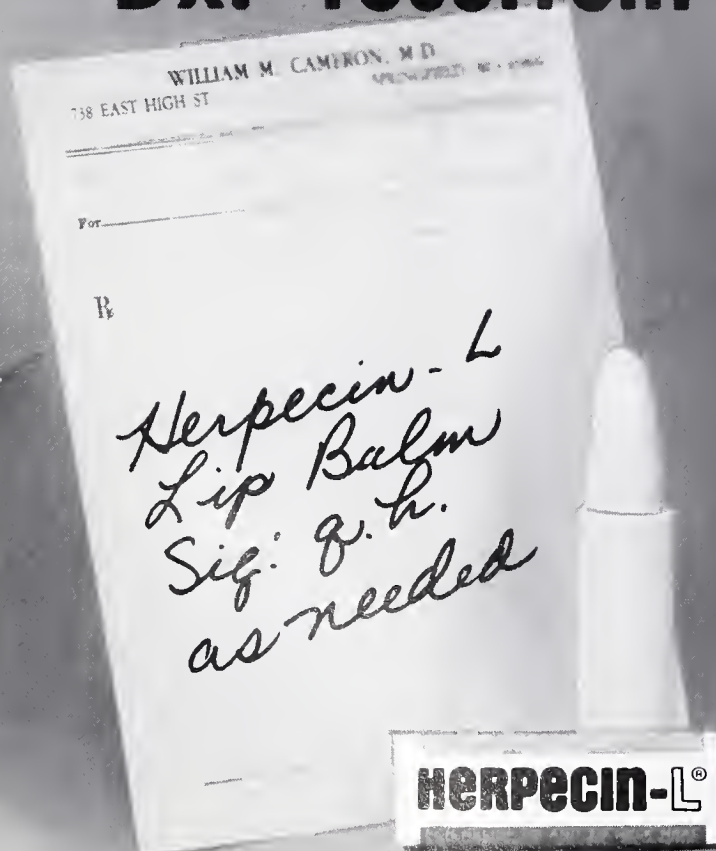
Ileal bypass procedures are somewhat successful in treating severe, refractory familial hypercholesterolemia. It is most useful in heterozygotes. Its benefit derives from reduced bile-acid resorption. Homozygotic familial hypercholesterolemia is more likely to respond to plasma exchange transfusion combined with cholestyramine and nicotinic acid, and at present this is the treatment of choice. A portacaval shunt has met limited success in treating homozygotes.

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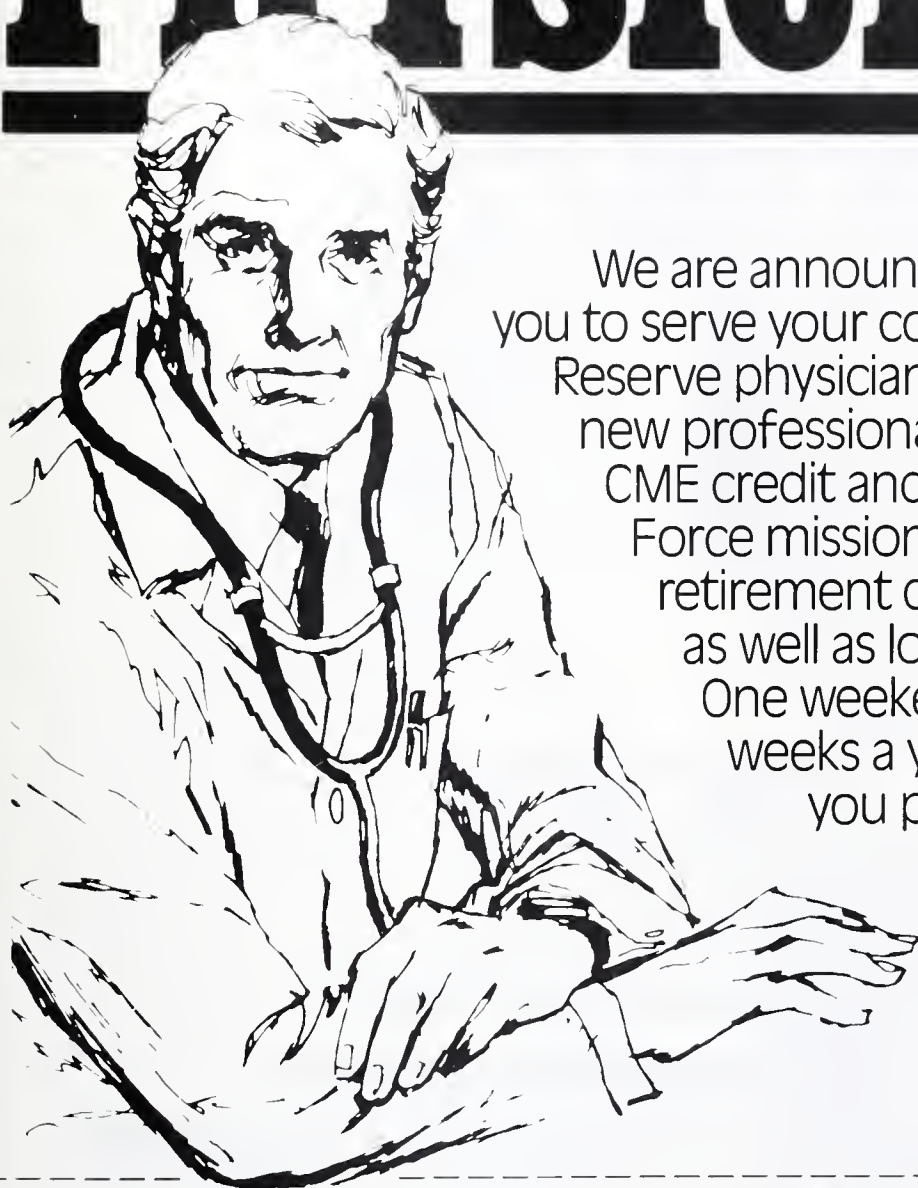
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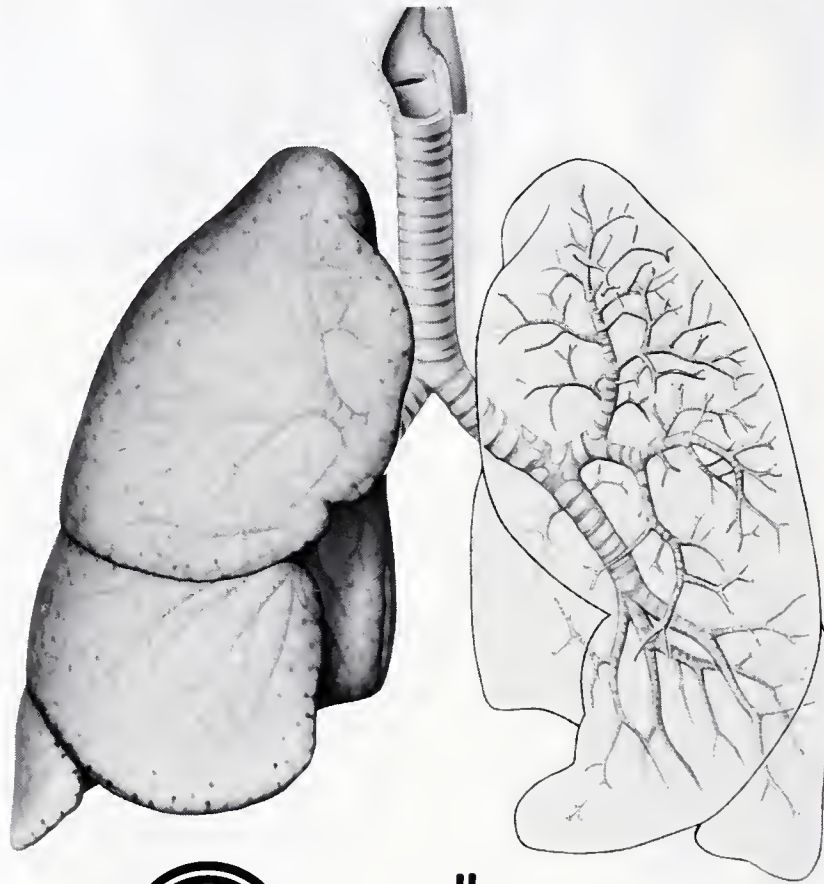
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Note: Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

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Summary. Consult the package literature for prescribing information.

Indications: Lower respiratory infections, including pneumonia, caused by susceptible strains of *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Streptococcus pyogenes* (group A β -hemolytic streptococci).

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Warnings:
CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients. Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:

- Discontinue Ceclor in the event of allergic reaction to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:

- Gastrointestinal (mostly diarrhea): 2.5%.
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever): 1.5%; usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness,

insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.

- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%; and, rarely, thrombocytopenia.

Abnormalities in laboratory results of uncertain etiology

- Slight elevations in hepatic enzymes.
- Transient fluctuations in leukocyte count (especially in infants and children).
- Abnormal urinalysis; elevations in BUN or serum creatinine.
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FROM OTHER YEARS

Mahlon Dickerson Ogden, Sr., M.D.

1913 - 1947

Edwina Walls, M.L.S.*

Editor's Note: For several years, Richard B. Clark, M.D., has supplied the Journal with the biographies of well-known Arkansas physicians from the past. Dr. Clark has notified us that his supply of biographies is quickly being depleted and he would like to invite physicians from across the state to submit biographies to the Journal. If you are interested in submitting a biography of an Arkansas physician, contact the Journal office.

A pioneer of prepayment medical and hospitalization programs in the United States was Dr. Mahlon Dickerson Ogden, Sr.

Dr. Ogden, a native Arkansan, was the son of Charles Cullen and Altamirah Deason Ogden. Born on December 5, 1881, he attended the public schools of Little Rock and was a graduate of the University of Arkansas Medical Department in 1904. He completed an internship at the Logan H. Roots Memorial Hospital and did postgraduate work at Johns Hopkins.

Between 1908 and 1916, Dr. Ogden was a member of the faculty of the UA Medical Department before serving as an instructor of Pathology and Anatomy, briefly before joining the Gynecology Department in 1911 and attaining the rank of professor in 1913.

By 1916, in addition to his service on the faculty of the Medical Department, he was in a group practice with Drs. O.K. Judd and A. M. Zell. They call the group "Trinity" because of the number of physicians in it. Their office was in the Bankers Trust Building (now First Commercial Bank building) at Second and Main. He was Surgeon-in-Chief at the Logan H. Roots Memorial Hospital between 1915 and 1920 and the Chief of Staff at St. Vincents Infirmary from 1921 to 1923.

After spending one year in Europe with the American Expeditionary Forces during World War I, he returned to Little Rock and specialized in the practice of surgery.

In 1923, Dr. Ogden and four other physicians formed a corporation in Little Rock with the purpose "To buy, sell,

own, erect, construct, control and operate a private hospital." This corporation led to the opening of Trinity Hospital. The opening of the hospital in 1924 was not controversial, but its "Agreement for Annual Medical Service", introduced to patient in 1931, was. This introduction to prepayment medicine was ahead of its time, in Arkansas and the United States, and ultimately resulted in the expulsion of the Trinity physicians from the local, Arkansas, and American medical societies.

Dr. Ogden was the driving force behind the prepayment concept at Trinity Hospital. Before the plan was initiated at Trinity, Dr. Ogden visited several hospitals to investigate their operation. Among them was the Ross-Loos Clinic of Los Angeles - one of the earliest HMOs in the United States. The basic philosophy for the plan was based



Dr. Mahlon Dickerson Ogden, Sr., M.D.

Ms. Walls is the history of medicine librarian at the University of Arkansas for Medical Sciences and has her master's degree in library sciences.

on the insurance principle of distributing the total cost of all services for illness occurring within a group among all the subscribers.

Dr. Ogden was aware from the beginning that he would be criticized by the medical profession for pioneering the concept of prepaid medicine in Arkansas, but he thought it inevitable that prepaid medicine was the wave of the future. He believed it was the best way to deliver the best care for the most people.

Prior to the opening of Trinity and the resulting controversy with the local medical society, Dr. Ogden had been active in the local, state, and American professional organizations. He served as secretary of the Pulaski County Medical Society in 1906-07 and was president of the group in 1910-11. He was chairman of the section on Pathology of the Arkansas Medical Society in 1909 and he became a member of the American College of Surgeons in 1915.

Dr. Ogden was an active member of the Group

Health Federation of America, a national organization of the operators of prepaid medical plans. He was the first president of the Federation in 1940 and also the fourth president in 1942 when the group held its annual meeting at the Albert Pike Hotel in Little Rock.

Dr. Ogden was married to Sue Peay Worthen of Little Rock on November 14, 1907. They had four two sons and two daughters. One son, Dr. Mahlon Ogden, Jr., continues to practice in Little Rock. Following a lengthy illness, Dr. Ogden died at home on September 3, 1947.

This Arkansas physician was the vital force behind Trinity Hospital and the introduction of prepayment medicine to Arkansas. He was characterized as a planner who was years ahead of his time and a real innovator in the history of Arkansas Medicine.

*From the University of Arkansas for Medical Sciences Library
History of Medicine/Archives Division.*

MEDICINE IN THE NEWS

CDC to Require Strict Enforcement of AIDS Infection Control Practices

Discovery that three hospital workers have become infected with the AIDS virus apparently as the result of skin contact with contaminated blood of patients had led the Centers for Disease Control to call for strict adherence to AIDS infection-control practices in hospital and other patient-care settings.

In an alert published recently in the *Mortality and Morbidity Weekly Report*, the CDC stresses the importance of medical and allied health professionals wearing hospital gloves, gowns and masks, and possibly eye goggles, when they risk becoming exposed to blood or other body fluids. It also recommended that at-risk personnel be trained how to use the safety accessories.

The American Medical Association was one of twenty national medical groups which were apprised of the accidental skin infection episodes at a special briefing held by the CDC. The cases, detected at three hospitals in two states, are among the very first to be reported where infection with the AIDS virus (an estimated 1.5 million Americans are infected) presumably occurred due to skin contact with patient blood.

CDC Officials said each of the incidents was thoroughly investigated. The investigators concluded that skin contact with the blood of AIDS-positive patients was the cause of infection since there was not evidence that any of the three individuals use intravenous drugs or were involved

in homosexual/heterosexual contact with individuals known to be at risk of infection.

What Does Amendment 64 Mean to Arkansas Physicians?

Amendment 64 (Act 431), which was passed in the November, 1986 General Election, has greatly widened the scope and jurisdiction of Municipal Courts, allowing them concurrent jurisdiction with Circuit Courts in matters of contractual agreements of \$3,000 or less. The law goes into effect July 1, 1987.

The legislature has created a simpler and speedier way to resolve lawsuits under \$3,000 for the owners and operators of private enterprise. The new forms are written in layman's terms, enabling the plaintiff or the designated representative to file a suit without having to hire an attorney. The legislature also reduced the filing fee for cases under \$1,000 from fifty dollars to eighteen dollars.

For physicians, this can make collecting problem accounts much easier. Anyone on a physician's staff can represent that physician; therefore, he/she need not be present. There are no collection fees to be paid.

For further information, contact the nearest Municipal court.

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A week-long camp for children ages seven to fourteen with cancer is scheduled for August 9-14, 1987 at Camp

Before prescribing, see complete prescribing information in SK&F CO. literature or PDR. The following is a brief summary.

WARNING

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K⁺ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K⁺ intake. Associated widened QRS complex or arrhythmia requires prompt additional therapy. Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.

Precautions: The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity. Theoretically, a patient transferred from the single entities of triamterene and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Angiotensin-converting enzyme (ACE) inhibitors can elevate serum potassium; use with caution with 'Dyazide'. Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin [ACTH]). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is uncommon with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function. Thiazides may add to or potentiate the action of other antihypertensive drugs. Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and respiratory distress including pneumonitis and pulmonary edema, transient blurred vision, sialadenitis, and vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with other usual calculus components. Rare incidents of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.

Supplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 1000 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only); in Patient-Pak™ unit-of-use bottles of 100.

BRS-DZ:L42

In Hypertension*... When You Need to Conserve K⁺

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A Century
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Aldersgate just outside of Little Rock. Sponsored by the Arkansas Division of the American Cancer Society and Med Camps, Inc., the camp will provide traditional camping activities for thirty children. This may include nature hikes, outdoor cooking, swimming, fishing, softball, drama, music, and crafts. The camp focuses on developing the individual camper's potential.

The child's medical management program is continued during the camp sessions in accordance with the directions of each camper's physician. The camp is equipped with an infirmary, staffed with a full-time nurse, and physicians visit the camp regularly or are available on a 24-hour basis. Dr. Morris Kletzel of Arkansas Children's Hospital is the cancer camp's medical director.

Openings not filled by cancer patients, may be filled by siblings. Fourteen year old patients may qualify to be junior counselors.

For more information and an application, contact the American Cancer Society, Arkansas Division, 5520 West Markham, Little Rock, AR 72205; 664-3480.

Certified Medical Assistants Can Help a Physician's Office Prosper

The person once call "Girl Friday" in the medical office has become a professional, multi-skilled person and a valued asset to the medical office term. Her title, medical assistant, reflects that professionalism.

Once trained on the job, many medical assistant are now being trained in postsecondary programs, usually on college campuses. The programs, which are accredited by the AMA's Committee on Allied Health education and Accreditation (CAHEA), provide from six months to two years training and produce the only allied health professionals specifically trained to work in a physician's office.

Medical assistants perform a wide variety of administrative and clinical duties. In many instances, they actually manage medical emergency situations and medical facilities and/or personnel. Trained to assist in patient care management, they have learned to communicate effectively in providing instructions to patients.

The American Association of Medical Assistants (AAMA) is the oldest and largest medical assistants organization. It exists solely to support the improvement of medical assistants through education. The AAMA has more than 500 chapters in almost every state, including Arkansas, and is working to help medical assistants keep their skills up-to-date.

The Certified Medical Assistant (CMA) program, developed by the organization in 1963, is insuring that medical assistants prove their competence. To date, more than 40,000 medical assistants have passed the examination resulting in CMA certification. In addition, CMA's must be re-certified every five years, either by accumulating recognized continuing education credits (CEU's) or by follow-up exam. The National Board of Medical Examiners serves as

the AAMA's test consultant and physicians serve as advisors to most AAMA chapters.

The real value of well-trained medical assistants is their marketability. Physicians are becoming aware that medical assistants can make or break a practice. The medical assistant is usually the first and last person to see the patient. Recent studies show the major factors in the filing of malpractice suits are office problems, failure to communicate, and failure to understand, rather than the physician's medical incompetence. Often, the patient spends more time with the assistant than the physician.

Physicians who hire CMA's are finding that their patients do receive better care and that their offices are managed effectively. A well-trained medical assistant with broad skills and expertise make them an obvious asset to the physician.

If you are interested in learning more about CMA's, contact Jenny Mitchell, 104 Harriet Drive, Jonesboro, AR 72401.

1988 Grants Available from Leukemia Society

The Leukemia Society of America is now accepting applications for 1988 grants to encourage research at both the basic science and clinical levels in the fields of leukemia and related diseases.

According to W. H. Kirsten, M.D., Chairman of the Grant Review Subcommittee, the awards are a primary source of salary support for individuals whose work is concentrated on seeking the causes and eventual cures for leukemia, the lymphomas, Hodgkin's disease, and multiple myeloma.

The Society offers three awards. The first, a five-year scholar grant for a total of \$200,000, is given to researchers who have demonstrated over a period of not less than five years their abilities to conduct original investigations in the specified fields. The second grant is given to those investigators in the intermediate stages of career development. It is a Special Fellow grant and totals \$87,000. The third, a three-year Fellow grant, totals \$70,500 and is for promising investigators with no or minimal prior experience assisting and training with scientists and physicians in the related fields. In all categories, candidates should hold a Ph.D., M.D., or equivalent degree. An award will not be made to an individual with full institutional salary support.

Deadline for filing applications with the Society is September 1, 1987. Only one application in each grant category from any one faculty sponsor may be submitted. Proposals will be evaluated on a competitive basis by the Leukemia Society's Grant Review subcommittee in January 1988 (Special Fellow and Fellows) and March 1988 (Scholars). Funding will begin July 1, 1988.

Applications forms and additional information can be obtained from the Research Grant Coordinator, The Leukemia Society of America, 733 Third Avenue, New York, New York 10017.

KEEPING UP

Breathing

August 18, 7:00 p.m. Presented by Thomas Preston Kennedy, M.D., Division of Pulmonary Medicine, University of Tennessee, Memphis. Sponsored by the Baxter County Regional Hospital, Mountain Home. Education Building, Baxter County Regional Hospital. Two Category I credit hours.

Regional Perinatal Conference

August 20, 6:00 p.m.-8:30 p.m. and August 21, 8:00 a.m.-3:45 p.m. Presented by Frank C. Miller, M.D. Sponsored by the UAMS Office of Continuing Education

for Physicians. Stroud Hall, St. Bernard's Regional Medical Center, Jonesboro. Six and three-quarters Category I credit hours. Fee: \$25.

Why Do I Keep Hurting Myself: Adolescent Alcoholism & Substance Abuse

September 15, 7:00 p.m. Presented by Vann Arthur Smith, PhD., C.A.C., Clinical Neuropsychologist, Libertyville, IL. Sponsored by Baxter County Regional Hospital, Mountain Home. Education Building, Baxter County Regional Hospital. Two hours Category I credit.

Recurring Education Programs

EL DORADO - AHEC

Behavioral Sciences Conference, first and fourth Friday, 12:15 p.m., AHEC - South Arkansas.
Chest Conference, third Wednesday, 12:30 p.m., Warner Brown Hospital
Fracture Conference, third Tuesday, 12:15 p.m., AHEC-South Arkansas
Gynecology-Pathology Conference, second Friday, 12:15 p.m., AHEC-South Arkansas
Internal Medicine Conference, first, second and fourth Wednesday, 12:15 p.m., AHEC-South Arkansas
Pathology Conference, second Tuesday, 12:15 p.m., AHEC-South Arkansas
Pharmacology Conference, second Thursday, 12:15 p.m., AHEC-South Arkansas
Obstetrics-Gynecology Conference, fourth Thursday, 12:15 p.m., AHEC-South Arkansas
Surgical Conference, first, second and third Monday, 12:15 p.m., AHEC-South Arkansas
Tumor Clinic, fourth Tuesday, 12:15 p.m., AHEC-South Arkansas

FAYETTEVILLE - AHEC NORTHWEST

Medicine Teaching Conference, first, third and fifth Friday, 7:30 a.m., Baker Conference Room, Washington Regional Medical Center

FAYETTEVILLE - VA MEDICAL CENTER

Medical Conference, each Wednesday, 12:00 noon, Conference Room, Building 1, VAMC
Pathology/Mortality Conference, each Friday, 12:30 p.m., Surgical Suite, VAMC

FORT SMITH-AHEC

Dermatology Conference, first Thursday, 12:00 p.m., Sparks Regional Medical Center
Family Practice Conference, third Wednesday, 12:00 p.m., Sparks Regional Medical Center
Neurology Conference, second Thursday, 12:00 p.m., Sparks Regional Medical Center

HOT SPRINGS-AMI NATIONAL PARK MEDICAL CENTER

Continuing Medical Education Luncheon, varying topics, second and fourth Friday, 12:30 p.m., Classrooms, AMI National Park Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, first and third Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Annex Building
Arkansas Methodist Hospital CME Conference, last Friday, 7:00 a.m., Arkansas Methodist Hospital, Paragould
Chest Conference, fourth Thursday, 12:00 noon, St. Bernard's Dietary Conference Room
Independence County Medical Society, second Tuesday, 7:30 p.m., White River Medical Center, Batesville
Interesting Case Conference, second and fifth Tuesday, when applicable, 12:00 noon, St. Bernard's Dietary Conference Room
Kennett Tumor Conference, second Tuesday (every other month), Twin Rivers Regional Medical Center, Kennett, Mo.
Methodist Hospital of Jonesboro CME Staff Conference, second Tuesday, 7:30 p.m., Cafeteria, Methodist Hospital of Jonesboro

Monthly Medical Lecture Series, third Tuesday, 7:30 p.m., rotates each month between Walnut Ridge and Pocahontas
Newport Tumor Conference, second Wednesday, 12:00 noon, rotates each month between Harris Clinic and Newport Hospital
Perinatal Conference, second Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Poplar Bluff Tumor Conference, third Wednesday, 12:00 noon, Lucy Lee Hospital, Poplar Bluff.
Tumor Conference, fourth Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Alternating Sub-Specialty Conference, third Wednesday, 12:00 noon, Second Floor Classroom
General Pediatrics Seminar, first and third Friday, 12:00 noon, Second Floor Classroom
Genetics Conference, each Wednesday, 12:00 noon, Sturgis Building, Room 457
Infectious Disease Conference, second Wednesday, 12:00 noon, Sturgis Building, Room 121
Oncology Conference, third Thursday, 8:00 a.m., Second Floor Classroom
Pediatric Grand Rounds, each Tuesday, 8:00 a.m., Sturgis Building, Auditorium
Pediatric Neuropsychiatry Conference, second Wednesday, 1:30 p.m., Polly R. Thomas Conference Room
Pediatric Neuroscience Conference, first Thursday, 8:00 a.m., Second Floor Classroom
Pediatric Pathology Conference, first Wednesday, 12:00 noon, Second Floor Classroom
Pediatric Pharmacology Conference, fifth Wednesday when applicable, 12:00 noon, Second Floor Classroom
Pediatric Radiology Conference, first and third Thursday, 12:00 noon, Second Floor Classroom
Pediatric Research Conference, third Monday, 12:00 noon, Second Floor Classroom
Problem Case Conference, second and fourth Friday, 12:00 noon, Second Floor Classroom
Respiratory Care Case Conference, each Monday, 3:00 p.m., Second Floor Classroom

LITTLE ROCK-ST. VINCENT INFIRMARY

Cancer Conference, first Wednesday, 12:00 noon, CARTI Auditorium. A meal is provided.
Cancer Conference, third and fourth Thursday, 12:00 noon, Room S1174K, Lab. A meal is provided.
General Medicine Journal Club, each Tuesday, 12:00 noon, Medical Affairs Conference Room. Bring your lunch.
Hematology-Oncology Conference, second Thursday, 12:00 noon, Laboratory Library. A meal is provided.
Interhospital Urology Grand Rounds, first Tuesday, 5:30 p.m., Classroom 1, Education Wing. Refreshments are provided.
Pulmonary Conference, second and fourth Wednesday, 12:00 noon, Classroom 1, Education Wing. A meal is provided.

LITTLE ROCK-UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

ACRC/CARTI Tumor Conference, each Wednesday, 12:00 noon,
ACRC Oncology Forum, fourth Thursday, 4:00 p.m., UAMS Education Building, Room G137,CARTI, Markham and University, Little Rock.
Anesthesia Lecture Series, each Wednesday and Thursday, 4:00 p.m., UAMS Education Building, Room G/110 A & B
Anesthesia Morbidity and Mortality Conference, each Tuesday, 6:45 a.m. (Wednesday afternoon only during last week of the month at 4:00 p.m.), UAMS Education Building, Room G/110 A&B
Interdisciplinary Gynecologic Cancer Conference, each Friday, 12:30 p.m., UAMS Education Building, Room G106 A&B
Medicine Grand Rounds, each Thursday, 12:15 p.m., UAMS Shorey Auditorium.
Medicine Research Conference, each Tuesday, 8:00 a.m., UAMS Shorey Building Room 8/105
Ob/Gyn Grand Rounds, each Wednesday, 7:30 a.m., UAMS Education Building, Room G/131B
Ophthalmology Problem Case Conference, each Thursday, 4:00 p.m., UAMS AAC Eye Clinic, Room 3/150.
Orthopaedic Basic Science Conference, each Tuesday, 11:00 a.m., UAMS Education Building, Room B/135
Orthopaedic Bibliography Conference, each Tuesday, 8:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Fracture Conference, each Tuesday, 7:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Grand Rounds, each Tuesday, 10:00 a.m., UAMS Education Building, Room B/135
Psychiatry Grand Rounds, each Friday, 11:00 a.m., UAMS Shorey Auditorium
St. Vincent Urology Grand Rounds, first Tuesday, 5:30 p.m., St. Vincent Infirmary, Education Building Room 159
Surgery Grand Rounds, each Saturday, 9:00 a.m., UAMS Education Building, Room G/131
Surgical Science Conference, each Saturday, 8:00 a.m., UAMS Education Building Room G/131
Urologic Topics, once or twice monthly, 5:00 p.m., UAMS
Urology Grand Rounds, twice monthly, 5:00 p.m., VAMC
Urology Morbidity and Mortality Workshop, last Wednesday, UAMS
Uro-Radiology Workshop, first Thursday, 5:00 p.m., UAMS
VA Medical Service Teaching Conference, each Thursday, 8:00 a.m., NLRVA, Building 66, Room 38
VA Research Methods Conference, first Wednesday, 12:00 noon, VAMC, Room 1E122
VA Surgery Grand Rounds, each Thursday, 12:45 p.m., VAMC, Room 2D109
VA Topics in Rehabilitation Medicine, each Thursday, 7:45 a.m., NLRVA Conference Room, Building 89L
VA Weekly Cancer Conference (Surgical Service), each Tuesday, 1:00 p.m., VAMC, Room 2D109

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, third Thursday, 7:00 a.m., Conference Room 1
Emergency Medicine Board Review, second Tuesday, 6:00 p.m., Third Floor Conference Room, Doctor's Park Building.
Grand Rounds Conference, each Wednesday, 12:00 noon, Conference Room 1. Lectures and Case Presentations. A light lunch will be served.
Pathology Conference, third Tuesday, 3:00 p.m., Pathology Library. Case Presentations.
Pulmonary Conference, each Tuesday, 12:00 noon, Shuffield Auditorium. Lunch served for \$1.75.
Surgery Conference, each Thursday, 7:30 a.m., Shuffield Auditorium. Lectures and Case Presentations.

PINE BLUFF-AHEC

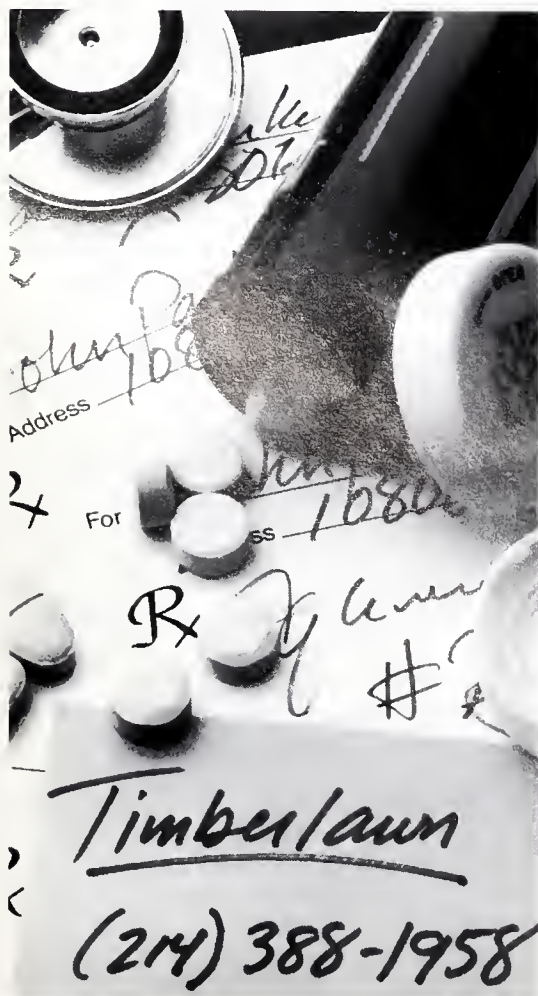
Behavioral Science Conference, each Thursday, 12:30 p.m., Jefferson Regional Medical Center

Chest Conference, second and fourth Friday, 12:30 p.m., Jefferson Regional Medical Center
Family Practice Conference, fourth Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Internal Medicine Conference, second and fourth Wednesday, 12:30 p.m., Jefferson Regional Medical Center
Obstetrics/Gynecology Conference, second Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Pediatric Conference, third Wednesday, 12:30 p.m., Jefferson Regional Medical Center
Radiology Conference, third Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Southeast Arkansas Medical Lecture Series, third Tuesday, 6:30 p.m., Rosswood County Club. Dinner meeting.
Sub-Specialty Conference, first Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Surgery Conference, first Wednesday, 12:30 p.m., Jefferson Regional Medical Center

TEXARKANA-AHEC

Chest Conference, May 20, 12:30 p.m., St. Michael Hospital
Neuro-Radiology Conference, second and fourth Wednesday, 7:00 a.m. breakfast, Wadley Regional Medical Center
Tumor Conference, first Wednesday, 7:00 a.m., St. Michael Hospital

As organizations accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the organizations named certify that these continuing medical education activities meet the criteria for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.



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- 1 Abco Cast Cutter and Spreader
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Manuscripts should be submitted to Martha S. Taylor, Journal Managing Editor, Arkansas Medical Society, Post Office Box 5776, Little Rock, Arkansas 72215. A transmittal letter should accompany the article and should identify one author as correspondent and include his address and telephone number.

MANUSCRIPT STYLE

The first page should list titles, degrees, and any hospital or university appointments of the author(s). Manuscripts should be typewritten, double-spaced, and have generous margins. The original and one copy should be submitted. Pages should be numbered. Manuscripts are not returned; however, original photographs or drawings will be returned upon request after publication. Manuscripts should be no longer than ten typewritten pages. Exceptions will be made only under most unusual circumstances.

REFERENCES

References should be limited to ten; if more than ten are listed, the author(s) may designate the ten most significant to be printed and readers will be referred to the authors(s) for the complete list. References must contain, in the order given: Name of author(s), title of article, name of periodicals with volume, page, month and year. References should be numbered consecutively in the order in which they appear in the text.

ILLUSTRATIONS

Illustrations should be professional drawn and photographed. Glossy black and white photos are preferred. They should not be mounted and should have the name of the author(s) and figure number penciled lightly on the back. An arrow should indicate the top of the illustration. In photographs in which there is any possibility of personal identification, an acceptable legal release must accompany the material. Up to four illustrations will be accepted at no charge to the author(s). If more than four are necessary, it is understood that the author(s) will be responsible for the reproduction costs.

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WHO IN THIS FAMILY IS BEING TREATED FOR A MUSCLE DISEASE?



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Muscular Dystrophy Association, Jerry Lewis, National Chairman

THINGS TO COME

JUNE 29-JULY 3

Pediatric Infectious Disease in the Office Practice.

Sponsored by the University of Colorado School of Medicine. The Gant, Aspen. Approved for Category I credit. For further information, contact: UC School of Medicine, Office of Continuing Medical Education, 4200 East Ninth Ave, Box C-295, Denver, CO 80262; (303) 394-5195.

JULY 3-8

Family Practice Board Review.

Sponsored by the Office of Continuing Medical Education, University of California San Diego School of Medicine. Hanalei Hotel, San Diego, California. Twenty-nine Category I credit hours. Fee: \$395. For further information contact: Office of Continuing Medical Education, UC San Diego School of Medicine, M-017, La Jolla, CA 92093; (619) 534-3940.

JULY 9-11

The Pituitary in Aspen.

Sponsored by the University of Colorado School of Medicine. Given Institute of Pathobiology, Aspen, Colorado. Approved for Category I credit. For further information, contact: UC School of Medicine, Office of Continuing Medical Education, 4900 East Ninth Ave, Box C-295, Denver, CO 80262; (303) 394-5195.

JULY 12-17

Twenty-Third Annual Internal Medicine Program.

Sponsored by the University of Colorado School of Medicine. YMCA of the Rockies, Estes Park, Colorado. Approved for Category I credit. For further information, contact: UC School of Medicine, Office of Continuing Medical Education, 4200 East Ninth Street, Box C-295, Denver, CO 80262; (303) 294-5195.

JULY 16-18 and JULY 23-25

July 16: Advances in Cardiology. July 23: Common

Emergencies in General Medicine. Sponsored by the University of Massachusetts Medical School, Berkshire Medical Center and Berkshire AHEC. Country Inn and Conference Center at Jiminy Peak, Hancock, Massachusetts. Sixteen Category I credit hours. Fee: \$295 (one conference); \$500 (two conferences). For further information contact: Berkshire AHEC, 725 North Street, Pittsfield, MA 01201; (413) 499-4161, ext. 2417.

JULY 16-19

Arkansas Academy of Family Physicians Fortieth

Annual Scientific Assembly. Sponsored by the Arkansas Academy of Family Physicians. Little Rock Excelsior Hotel and Statehouse Convention Center. Twenty-four and one-half hours of Category I credit. Registration fees: before June 25 - members, \$125; non-members, \$150. After June 25 - members,

\$150; non-members, \$175. Hands-on workshops will be available for \$75 for each course taken. Pre-registration for hands-on required. Hands-on courses are: "Endometrial Sampling and Office D & C"; "EGD"; "Flexible Sigmoidoscopy"; "Sports Medicine"; and "Treadmill Stress Testing." The scientific program is:

THURSDAY, JULY 16

- | | | |
|------------|---|-----------------------------|
| 10:00 a.m. | AIDS Update | T. Yamauchi, M.D. |
| 10:45 a.m. | New Approaches to Prevention of Renal Failure | George L. Ackerman, M.D. |
| 11:25 a.m. | Evaluation and Management of Urologic Problems of the Mature Male | John F. Redman, M.D. |
| 1:15 p.m. | Managing Patients with Multiple Unexplained Physical Complaints | G. Richard Smith, Jr., M.D. |
| 2:00 p.m. | Early Detection of Colon Cancer | Nicholas P. Lang, M.D. |
| 2:40 p.m. | Break - Visit Exhibits | |
| 3:00 p.m. | Early Detection of Breast Disease | J. Michael Stair, M.D. |
| 3:45 p.m. | Nutrition and Coronary Artery Disease | Ronald F. Kahn, M.D. |
| 4:30 p.m. | Myofascial Disorders, | A. Lewis Kolodny, M.D. |

FRIDAY, JULY 17

- | | | |
|------------|--|-------------------------|
| 8:00 a.m. | Contraception | Mildred S. Hanson, M.D. |
| 8:45 a.m. | New Challenges in Tuberculosis | William W. Stead, M.D. |
| 9:15 a.m. | Break - Visit Exhibits | |
| 9:45 a.m. | Fetal Monitoring for the Family Physician | Kent Alan Petrie, M.D. |
| 10:30 a.m. | Management of Chronic Pain | A. Lewis Kolodny, M.D. |
| 11:10 a.m. | Early Therapy in Myocardial Infarctions: Changing Concepts | Andrew Kumpuris, M.D. |
| 1:30 p.m. | Physician Reimbursement for Medicare | Robert Benefield, M.D. |
| | | J. D. Sconce |
| | | Margarette Smith |
| | | Rosemary Wilson |
| 2:30 p.m. | Athletes - Use and Misuse of Drugs | Bruce Woolley, Pharm.D. |
| 3:15 p.m. | Break - Visit Exhibits | |

4:15 p.m. Sexually Transmitted Diseases
Mildred S. Hanson, M.D.

SATURDAY, JULY 18

8:15 a.m. Peer Review Organization
James Armstrong, M.D.
James Maupin, M.D.
J. D. Sconce
Frank Wise

9:30 a.m. International Classification of Primary Care:
A New Approach to Clinical Care
Mauris Wood, M.D.

10:15 a.m. Break

10:30 a.m. Early Detection of the Stroke Prone Patient
Robert Barnes, M.D.

11:10 a.m. Inflammatory Disease of the Bowel
Dean Kumpuris, M.D.

1:15 p.m. Estrogen Replacement Therapy
Steve N. London, M.D.

2:00 p.m. Treatment of Post Non Q Wave Myocardial
Infarction
Robert Schlandt, M.D.

2:45 p.m. "Curbstone Consultation" with Drs. London
and Schlandt (one-on-one question
and answer session).

3:30 p.m. Phobias, Bulemia, Insomnia and Drug Abuse
Robert L. DuPont, Jr., M.D.

SUNDAY, JULY 19

9:30 a.m. Doctors, Drugs and Fun: Modern Medicine
Discovers Aesculapius Second Daughter
Robert L. DuPont, Jr., M.D.

11:00 a.m. Adjourn

For further information about the scientific program, registration information, hands-on sessions, room reservations or cancellations, and social functions, contact: Carla Mayfield, Executive Vice President, AAFP, 7509 Cantrell, Suite 236, Little Rock, AR; (501) 663-9075.

JULY 18

Interoperative Radiation: A New Combined Treatment Approach to Cancer. Sponsored by the University of Kansas Medical Center. University of Kansas Medical Center, Kansas City, KS. AMA, AAFP, and CME credit available. For further information contact: Eileen Buitron, University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Boulevard, Kansas City, KS 66103; (913) 588-4480.

JULY 23-25

Cardiology Update. Sponsored by the Institute for Medical Studies, Loyola University. Minneapolis, Minnesota. Category I credit to be announced. For further information contact: Lisa Krehbiel, Institute for Medical Studies, 30131 Town Center Drive, Suite 215, Laguna Niguel, CA 92677; (714) 495-4499.

JULY 27-31

Dynamic Psychotherapy: The Therapeutic Bond. Sponsored by the University of Colorado School of Medicine. Given Institute of Pathobiology, Aspen, Colorado. Category I credit available. For further information, contact: UC School of

Medicine, Office of Continuing Education, 4200 East Ninth Avenue, Box C-295, Denver, CO 80262; (303) 394-5195.

JULY 27-31

Sports Medicine Update 1987. Sponsored by the Office of Continuing Medical Education, UC San Diego School of Medicine. San Diego Princess at Vacation Village, San Diego, CA. Up to 29.5 credit hours available. Fee: \$325, physicians; \$225, allied health professionals and resident; \$30, each optional workshop. For further information contact: Office of Continuing Medical Education, UC San Diego School of Medicine, M-017, La Jolla, CA 92093; (619) 534-3940.

JULY 31-AUGUST 2

Pediatric Sports Medicine - North American Society of Pediatric Exercise Medicine (NASPEM). Sponsored by the University of Colorado School of Medicine. Given Institute of Pathobiology, Aspen, Colorado. Category I credit available. For further information, contact: UC School of Medicine, Office of Continuing Education, 4900 East Ninth Avenue, Box C-295, Denver, CO 80262; (303) 394-5195.

AUGUST 3-6

Thirtieth Annual Pediatric Program. Sponsored by the University of Colorado School of Medicine. Given Institute of Pathobiology, Aspen, Colorado. Category I credit available. For further information, contact: UC School of Medicine, Office of Continuing Education, 4900 East Ninth Avenue, Box C-295, Denver, CO 80262; (303) 394-5195.

AUGUST 6-11

Thirteenth Annual Primary Care Orthopedics. Sponsored by the University of Colorado School of Medicine. Given Institute of Pathobiology, Aspen, Colorado. Category I credit available. For further information, contact: UC School of Medicine, Office of Continuing Education, 4900 East Ninth, Box C-295, Denver, CO 80262; (303) 394-5195.

AUGUST 20-21


1987 Regional Perinatal Conferences. Sponsored by the Arkansas High Risk Pregnancy Program, Department of Obstetrics and Gynecology and the Office of Continuing Education, UAMS AHECs. Stroud Hall, St. Bernard's Regional Medical Center, Jonesboro, AR. Six and three-quarter hours Category I credit. Fee: \$25 for physicians and \$10 for nurses and other health professionals. For further information, contact: UAMS, Arkansas High Risk Pregnancy Program, 4301 West Markham, Slot 518, Little Rock, Arkansas 72205.

AUGUST 24-26

Cardiology Update. Sponsored by the Institute for Medical Studies. San Diego, California. Application has been submitted for fifteen hours of Category I credit. For further information, contact: Lisa Krehbiel, Institute for Medical Studies, 30131 Town Center Drive, Suite 215, Laguna Niguel, CA 92677; (714) 495-4499.

SEPTEMBER 2-3

Advanced Cardiac Life Support Provider Course. Sponsored by the University of Kansas Medical Center. Student Center, Francisco Lounge, University of Kansas Medical Center.



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*Please see brief summary of
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Thirteen and one-half Category I credit hours. Fees are to be announced. For further information, contact: David S. Baldwin, M.P.A., University of Kansas Medical Center, Office of Continuing Medical Education, 39th and Rainbow Blvd., Kansas City, KS 66103; (913) 588-4480.

SEPTEMBER 10-12

Advanced Doppler Echocardiography Seminar.

Sponsored by the Center for Medical Ultrasound, Bowman Gray School of Medicine. Innisbrook Resort Conference Center, Tarpon Springs, Florida. Seventeen Category I credit hours.

For further information, contact: Registrar, Ultrasound Center, Bowman Gray School of Medicine, 300 S. Hawthorne Road, Winston-Salem, NC 27103; (919) 748-4505.

SEPTEMBER 25

Nutrition Concerns for Women: A Symposium for Health Professionals. Sponsored by the University of Kansas Medical Center. Kansas City, KS. Category I credit available. For further information, contact: Eileen Buttrick, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103; (913) 588-4480.

NEWSMAKERS

Dr. Amail Chudy, a North Little Rock family practitioner for thirty-one years, recently announced that he would be retiring. Dr. Chudy was named Family Doctor of the Year by the American Academy of Family Physicians and is the Speaker of the House of Delegates for the Arkansas Medical Society.

Fourth and fifth graders in Cabot had a program and discussion with **Dr. Fred Inman** about the dangers of smokeless tobacco. Dr. Inman, a Cabot general practitioner, presented slides at the school and answered the children's questions.

The Victoria Hospital Eye Clinic in Castries, on the island of St. Lucia in the Caribbean, was the workplace of **Dr. Morris Henry** recently. The Fayetteville ophthalmologist treated the islanders' eye problems for a week this spring and also taught some of the residents new techniques in eye surgery.

Robert G. Vogel, D.D.S., M.D., was the speaker at the Hot Spring County Crusade kick-off dinner. Dr. Vogel, a plastic and maxillofacial surgery specialist, is from Little Rock.

Dr. John Hann of Imboden, was recently honored at a Public Health Service meeting in Dallas, Texas, with the Regional Health Administrator's Award. The award, presented by Dr. C. Everett Koop, the surgeon general of the United States, was given in recognition of "outstanding and dedicated service to the Imboden, Arkansas, community as a member of the The National Health Service Corps."

Nancy L. Snyderman, M.D., has been awarded a Clinical Oncology Career Development Award by the American Cancer Society. Dr. Snyderman, an assistant professor and director of the division of Head and Neck Oncology in the department of Otolaryngology at the University of Arkansas for Medical Sciences, will receive \$55,000 funding for a two-year period for clinical research.

Dr. Jim DeRossitt, a Forrest City obstetrician/gynecologist, spent two weeks in Honduras with his Air National Guard unit. Dr. DeRossitt said his two weeks were more of a "general practitioner's situation" and he enjoyed sharpening his overall skills.

Dr. Donald G. Browning retired early this year following a nineteen year practice. Dr. Browning was a gastroenterologist in private group practice in Little Rock and practiced from 1968 to 1987. He was the Chief of the Department of Medicine at St. Vincent Infirmary from 1975 to 1976 and was one of the charter members of the Arkansas-Oklahoma Endoscopic Society, serving as the first president.

"Alzheimer's Disease Update" was the lecture topic of **Dr. C. Araoz**, a Little Rock pathologist, at the Sixteenth Annual Meeting of the Oklahoma-Arkansas Society of Medical Technologists at the Robinson Center in Little Rock. Dr. Araoz also spoke recently at the meeting of the Arkansas Society of Infection Control Epidemiologists at the National Park Medical Center.

NEW MEMBERS

GARLAND COUNTY MEDICAL SOCIETY

BEAMER, LEE F., General Practice, Hot Springs Village. Born August 30, 1934, St. Louis, MO. Pre-medical education, Wooster College, Wooster, Indiana and University of Indiana, Bloomington, B.A., 1955. Medical education, Indiana University Medical School, 1960. Internship, Indiana University Medical School Hospitals. Residency, Pathology, Northwestern University, Miami University School of Medicine (Jackson Memorial Hospital). Military record, Lt. MC USNR, served as general medical officer with 3rd Marines, U.S. Pacific Fleet, and the 1st Marine Air Wing in CONUS, Japan, Rep. of South Viet Nam. Practice experience, Pathology, seventeen years; Forensic, two years. Teaching appointments, Instructor, Otorhinolaryngologic pathology, Jackson Memorial Hospital; Assistant in Pathology Volunteer staff, Northwestern University Medical School. Board certified, AP, CP, FP. Member, Fellow, American Society of Clinical Pathologists; Fellow, College of American Pathologists; Fellow, American Academy of Forensic Science.

SCHMIDT, CLINTON CHARLES, Family Practice, Hot Springs. Born October 16, 1955; Mercer, CA. Pre-medical education, Louisiana Tech University and Centenary College, Shreveport, LA; B.S., 1978. Medical education, Louisiana State University Medical Center, Shreveport, 1983. Internship and Residency, LSU Program B at E. A. Conway Memorial Hospital, Monroe. Board eligible.

INDEPENDENCE COUNTY MEDICAL SOCIETY

HAYS, SARAH F., Neurology, Batesville. Born December 26, 1952, Dallas, TX. Pre-medical education, Harding University, Searcy, B.S., 1974. Medical Education, University of Arkansas for Medical Sciences, 1980. Internship and Residency, UAMS. Practice experience, one year, Little Rock V. A. Hospital and one year, Batesville. Teaching appointments, Assistant Professor, UAMS, Neurology. Board certified, American Board Psychiatry and Neurology. Member, American Academy of Neurology.

MILLER COUNTY MEDICAL SOCIETY

BRUBAKER, L. M., Family Practice, Horatio. Born September 3, 1944, Enterprise, Oregon. Pre-medical education, University of Albuquerque, NM, B.A., 1968. Medical education, University Autonoma de Guadalajara,

1973. Internship, Regina General Hospital, Regina, Saskatchewan, Canada. Residency, Community Hospital, Glen Cove, New York. Practice experience, nine years. Board certified. Member, AMA, AAFP, Texas Medical Association, TAFP.

PULASKI COUNTY MEDICAL SOCIETY

COGBURN, BOB E., Hematology/Oncology, Little Rock. Born September 17, 1942, Fort Smith. Pre-medical education, Phillips University, Enid, OK; B.S., 1966. Medical education, University of Arkansas for Medical Sciences, 1973. Internship and Residency, Keesler USAF Medical Center, Biloxi, MS; UAMS, Little Rock. Practice experience, Wright Patterson USAF Medical Center and USAF Hospital Hill, Hill AF Base, Utah. Board certified, Hematology and Oncology; eligible, Internal Medicine.

HOLT, EVERETT L., Family Practice, Hot Springs Village. Born January 24, 1921, Columbus, Ohio. Pre-medical education, Indiana University, Bloomington. Medical education, Indiana University School of Medicine, Indianapolis, 1952. Internship, St. Vincent Family Practice Program, St. Vincent Hospital, Indianapolis. Practice experience, Corpus Christi, TX, 23 years. Board certified, Family Practice.

MARECEK, RAYMOND L., Internal Medicine, North Little Rock. Born August 8, 1939, Little Rock. Pre-medical education, Christian Brothers College, Memphis, TN, and Hendrix College, Conway. Medical education, University of Arkansas for Medical Sciences, 1964. Internship, Ancker (Ramsey County) Hospital, St. Paul MN. Residency, UAMS, Internal Medicine and Duke University Medical Center, Endocrinology. Practice experience, Little Rock, 1972-1975; and St. Louis Park, MN, 1975-1987. Board certified, Endocrinology and Internal Medicine.

RESIDENT MEMBERS

BATES, RAMONA L. Born July 29, 1957, Ft. Leonard Wood, MO. Pre-medical education, University of Arkansas, Fayetteville, B.A., 1978. Residency field of study, Head and Neck/Microsurgery.

FARQUE, GREG L. Born August 15, 1950, Crossett. Pre-medical education Louisiana Tech University, Ruston, B.S., 1972. Medical education, UAMS, 1984. Residency field of study, Family Practice.

IN MEMORIAM

DR. RICHARD F. GRAHAM

Dr. Richard F. Graham, a Hot Springs family practitioner, died April 12, 1987. He was 62.

Dr. Graham was a graduate of the University of Tennessee Medical School and had practiced in Hot Springs since 1953. Dr. Graham was a member of the American Academy of Family Practice and the AMA as well as a member of the Arkansas and Garland County Medical Societies.

Dr. Graham is survived by his wife, Joyce Graham of Hot Springs; two sons, Samuel and William Graham, also of Hot Springs; and two daughters Kathy Rucci of Sayreville, NJ, and Suzanne Scott of Orange Park, FL.

DR. RICHARD A. HINKLE

Richard Allan Hinkle, M.D., aged 64, died May 9, 1987. He was a family practitioner in Quitman.

Dr. Hinkle was a graduate of Hendrix College and the University of Arkansas medical school. He received the Buchanan Key and was a member of the Arkansas Medical Society. Dr. Hinkle also served in World War II and the Korean war.

Survivors are his wife, Hazel Wells Hinkle; a son, Richard A. Hinkle, Jr. of Fort Smith and three daughters, Holly McNair of Quitman, Linda Foster of Plainview (Yell County) and Liz Loftis of Benton.

RESOLUTIONS

A Surgeon's Metaphor

Living is a flaxen light in the dawning dew, the aroma of fresh coffee in the surgery lounge, the banter of colleagues.

Living is a moment of deliberation at the scrub sink, the cleaning of cuticles with a stiff scrub brush, the French taxi alarm of cardiac monitor.

Living is flesh incised, bright blood flowing, vessels clamped and captured, sutures placed and trimmed.

Living is a patient's smile, incision healed and cancer cured.

Living is a mackerel sky in the daylight; cathedral chimes at midnight.

Dedicated to John K. Sigler, M.D., and Clark A. Erickson, M.D., two of my friends recently departed. I miss you both.

Paul I Wills, M.D., F.A.C.S.

WHEREAS, the members of the Pulaski County Medical Society note with sincere sorrow the recent death of one of its most highly esteemed members, John McCollough Smith, M.D.; and

WHEREAS, he had been a member of the Society for

forty-two years and had held every office the Society had to offer, rising to the Presidency in 1962; and

WHEREAS, he served as a member of the Society's Executive Committee for more than thirty years and had been one of its representatives to the House of Delegates of the Arkansas Medical Society for an equal length of time; and

WHEREAS, Dr. Smith's devotion to community service has been unequalled as evidenced by his service to athletic organizations, to civic clubs and his church; therefore be it

RESOLVED, that this resolution be adopted as an indication of the great respect in which he was held by his colleagues; and

RESOLVED, that a copy of this resolution be presented as a sincere expression of our sympathy to his family; and

RESOLVED, that this resolution be made a part of the permanent archives of the Society; and

RESOLVED, that a copy be made available to the Journal of the Arkansas Medical Society for publication.

Unanimously Adopted

May 20, 1987

Executive Committee

By Direction of the Memorials Committee

John D. Pike, M.D., Chairman

Henry Hollenberg, M.D.

Robert Watson, M.D.

WHEREAS, the members of the Senior Physicians of Arkansas are greatly bereaved by the recent death of our beloved leader and President, John McCollough Smith, M.D.; and

WHEREAS, he was instrumental in the formation of this organization three years ago and had served as its leader and most enthusiastic member since that time; and

WHEREAS, Dr. Smith was an inspiration to our group in the manner in which he conducted the meetings and in his direction which assured the success of the newly formed group which is unique to the State of Arkansas; therefore be it

RESOLVED, that the Senior Physicians of Arkansas pause and reflect upon the privilege which has been ours in our association with Dr. Smith, and

RESOLVED, that we adopt this resolution as our sincere expression of condolences and sympathy to the members of Dr. Smith's family, and

RESOLVED, that this resolution be made a part of the permanent records of this organization.

Adopted Unanimously

Wednesday, May 13, 1987

Paul Harris, Executive Secretary



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ZANTAC® 150 h.s.

ranitidine HCl/Glaxo 150 mg tablets

EFFECTIVE MAINTENANCE THERAPY

for healed duodenal ulcer patients

See last page for references and
Brief Summary of Product Information.

Glaxo / 

CONFIRMED

In two randomized, double-blind, and well-controlled clinical trials, ZANTAC 150 mg h.s. significantly superior to cimetidine 400 mg h.s. for maintenance therapy in healed duodenal ulcers.

Percent of patients with observed duodenal ulcer recurrence

		0-4 months	0-8 months	0-12 months	No. patients
USA ¹	ranitidine 150 mg h.s.	9%	14%*	16%†	60
	cimetidine 400 mg h.s.	23%	34%	43%	66
UK, Ireland, Australia ²	ranitidine 150 mg h.s.	8%‡	14%‡	23%‡	243
	cimetidine 400 mg h.s.	21%	34%	37%	241

*p=0.02

†p=0.01

‡p<0.004

%=life-table estimates

All patients were permitted prn antacids for relief of pain.

These two trials used the currently recommended dosing regimen of cimetidine (400 mg h.s.) and ranitidine (150 mg h.s.). A comparison of other dosing regimens has not been studied.

The studied dosing regimens are not equivalent with respect to the degree and duration of acid suppression or suppression of nocturnal acid.

The superiority of ranitidine over cimetidine in these trials indicates that the dosing regimen currently recommended for cimetidine is less likely to be as successful in maintenance therapy.

Convenient once-a-night dose with a

low incidence of side effects³

Headache, sometimes severe, seems to be related to ranitidine administration. Other side effects have been reported; for a complete listing, see the ADVERSE REACTIONS section in the Brief Summary.

No significant interference with the hepatic cytochrome

P-450 enzyme system at recommended doses

ZANTAC 150 mg has no significant drug interactions with theophylline, phenytoin, or warfarin. The bioavailability of certain medications whose absorption is dependent on a low gastric pH may be altered when ZANTAC or other medications that decrease gastric acidity are administered.

Zantac[®] 150
ranitidine HCl/Glaxo 150 mg tablets

One tablet at bedtime
for maintenance

See next page for references and
Brief Summary of Product Information.

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Zantac[®] 150

ranitidine HCl/Glaxo 150 mg tablets

*One tablet at bedtime for maintenance therapy
in healed duodenal ulcer patients*

References:

1. Silvis SE, Griffin J, Hardin R, et al: Final report on the United States multicenter trial comparing ranitidine to cimetidine as maintenance therapy following healing of duodenal ulcer. *J Clin Gastroenterol* 1985;7(6):482-487.
2. Gough KR, Korman MG, Bardhan KD, et al: Ranitidine and cimetidine in prevention of duodenal ulcer relapse: A double-blind, randomised, multicentre, comparative trial. *Lancet* 1984;ii:659-662.
3. Data available on request, Glaxo Inc.

ZANTAC[®] 150 Tablets
(ranitidine hydrochloride)
ZANTAC[®] 300 Tablets
(ranitidine hydrochloride)

BRIEF SUMMARY OF PRODUCT INFORMATION

The following is a brief summary only. Before prescribing, see complete prescribing information in ZANTAC[®] product labeling.

INDICATIONS AND USAGE: ZANTAC[®] is indicated in:

1. Short-term treatment of **active duodenal ulcer**. Most patients heal within four weeks.
2. **Maintenance therapy** for duodenal ulcer patients at reduced dosage after healing of acute ulcers.
3. The treatment of **pathological hypersecretory conditions** (eg, Zollinger-Ellison syndrome and systemic mastocytosis).
4. Short-term treatment of **active, benign gastric ulcer**. Most patients heal within six weeks and the usefulness of further treatment has not been demonstrated.
5. Treatment of **gastroesophageal reflux disease (GERD)**. Symptomatic relief commonly occurs within one or two weeks after starting therapy and is maintained throughout a six-week course of therapy.

In active duodenal ulcer, active, benign gastric ulcer, hypersecretory states, and GERD, concomitant antacids should be given as needed for relief of pain.

CONTRAINDICATIONS: ZANTAC[®] is contraindicated for patients known to have hypersensitivity to the drug.

PRECAUTIONS: Symptomatic response to ZANTAC[®] therapy does not preclude the presence of gastric malignancy.

Since ZANTAC is excreted primarily by the kidney, dosage should be adjusted in patients with impaired renal function (see **DOSAGE AND ADMINISTRATION**). Caution should be observed in patients with hepatic dysfunction since ZANTAC is metabolized in the liver.

False-positive tests for urine protein with Multistix[®] may occur during ZANTAC therapy, and therefore testing with sulfosalicylic acid is recommended.

Although recommended doses of ZANTAC do not inhibit the action of cytochrome P-450 enzymes in the liver, there have been isolated reports of drug interactions which suggest that ZANTAC may affect the bioavailability of certain drugs by some mechanism as yet unidentified (eg, a pH-dependent effect on absorption or a change in volume of distribution).

Lack of experience to date precludes recommending ZANTAC for use in children or pregnant patients. Since ZANTAC is secreted in human milk, caution should be exercised when administered to a nursing mother.

ADVERSE REACTIONS: Headache, sometimes severe, seems to be related to ZANTAC[®] administration. Constipation, diarrhea, nausea/vomiting, and abdominal discomfort/pain have been reported. There have been rare reports of malaise, dizziness, somnolence, insomnia, vertigo, tachycardia, bradycardia, premature ventricular beats, and arthralgias. Rare cases of reversible mental confusion, agitation, depression, and hallucinations have been reported, predominantly in severely ill elderly patients.

In normal volunteers, SGPT values were increased to at least

twice the pretreatment levels in 6 of 12 subjects receiving 100 mg qid IV for seven days, and in 4 of 24 subjects receiving 50 mg qid for five days. With oral administration there have been occasional reports of reversible hepatitis, hepatocellular or hepatocanalicular or mixed, with or without jaundice.

There have been rare reports of reversible leukopenia, granulocytopenia, thrombocytopenia, and pancytopenia.

Although controlled studies have shown no antiandrogenic activity, occasional cases of gynecomastia, impotence, and loss of libido have been reported in male patients receiving ZANTAC, but the incidence did not differ from that in the general population.

Incidents of rash, including rare cases suggestive of mild erythema multiforme, and, rarely, alopecia, have been reported, as well as rare cases of hypersensitivity reactions (eg, bronchospasm, fever, rash, eosinophilia) and small increases in serum creatinine.

OVERDOSAGE: Information concerning possible overdose and its treatment appears in the full prescribing information.

DOSAGE AND ADMINISTRATION: Active Duodenal Ulcer: The current recommended adult oral dosage is 150 mg twice daily. An alternate dosage of 300 mg once daily at bedtime can be used for patients in whom dosing convenience is important. The advantages of one treatment regimen compared to the other in a particular patient population have yet to be demonstrated.

Maintenance Therapy: The current recommended adult oral dosage is 150 mg at bedtime.

Pathological Hypersecretory Conditions (such as Zollinger-Ellison Syndrome): The current recommended adult oral dosage is 150 mg twice a day. In some patients it may be necessary to administer ZANTAC 150-mg doses more frequently. Doses should be adjusted to individual patient needs, and should continue as long as clinically indicated. Doses up to 6 g/day have been employed in patients with severe disease.

Benign Gastric Ulcer: The current recommended adult oral dosage is 150 mg twice a day.

GERD: The current recommended adult oral dosage is 150 mg twice a day.

Dosage Adjustment for Patients with Impaired Renal Function: On the basis of experience with a group of subjects with severely impaired renal function treated with ZANTAC, the recommended dosage in patients with a creatinine clearance less than 50 ml/min is 150 mg every 24 hours. Should the patient's condition require, the frequency of dosing may be increased to every 12 hours or even further with caution. Hemodialysis reduces the level of circulating ranitidine. Ideally, the dosage schedule should be adjusted so that the timing of a scheduled dose coincides with the end of hemodialysis.

HOW SUPPLIED: ZANTAC[®] 300 Tablets (ranitidine hydrochloride equivalent to 300 mg of ranitidine) are yellow, capsule-shaped tablets embossed with "ZANTAC 300" on one side and "Glaxo" on the other. They are available in bottles of 30 (NDC 0173-0393-40) and unit dose packs of 100 tablets (NDC 0173-0393-47).

ZANTAC[®] 150 Tablets (ranitidine hydrochloride equivalent to 150 mg of ranitidine) are white tablets embossed with "ZANTAC 150" on one side and "Glaxo" on the other. They are available in bottles of 60 tablets (NDC 0173-0344-42) and unit dose packs of 100 tablets (NDC 0173-0344-47).

Store between 15° and 30°C (59° and 86°F) in a dry place. Protect from light. Replace cap securely after each opening.

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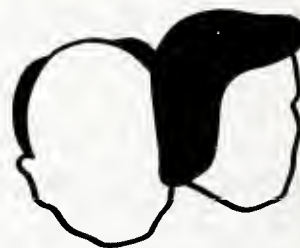
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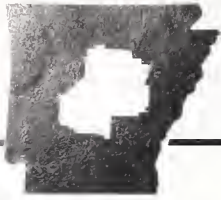
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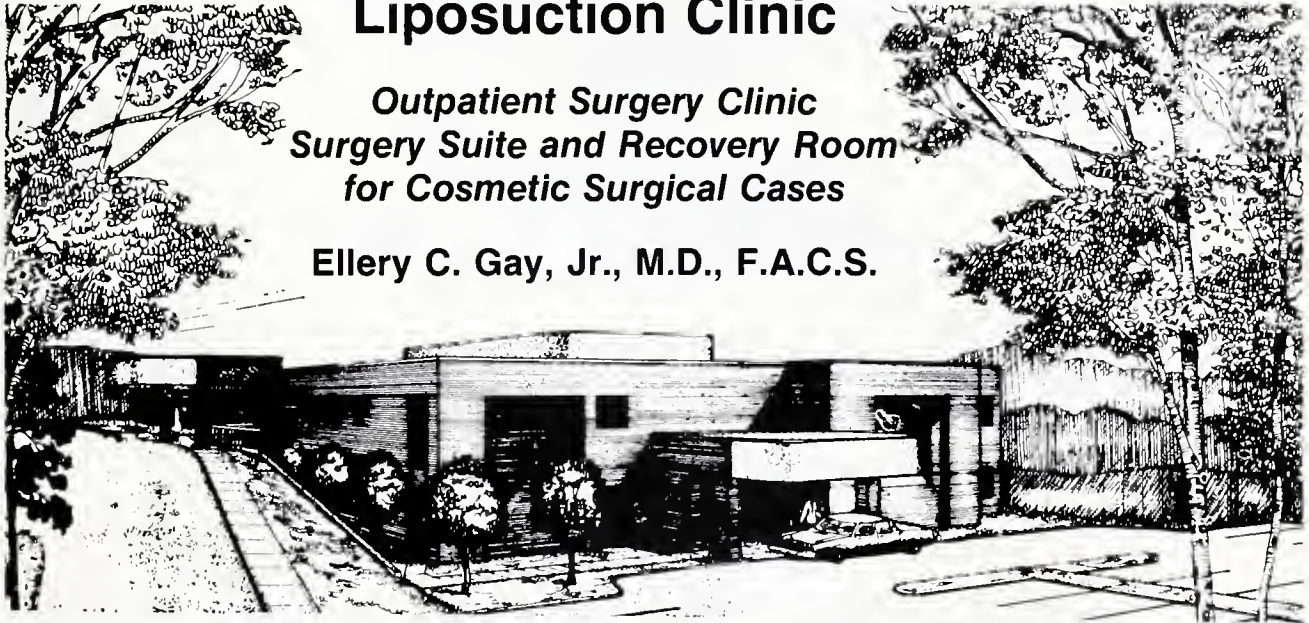
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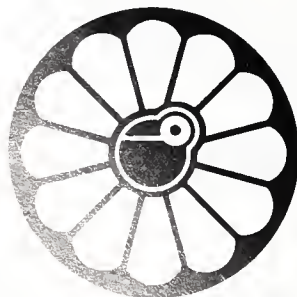
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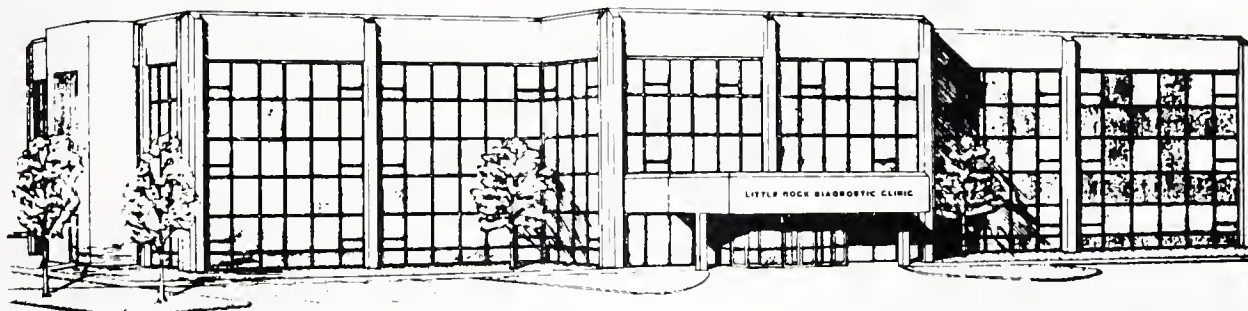
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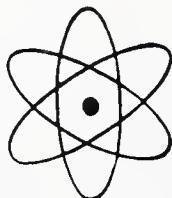
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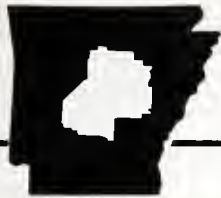
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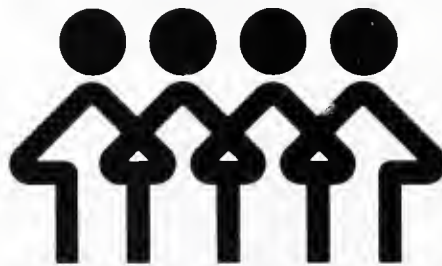
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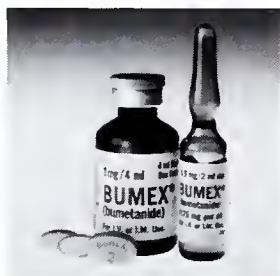
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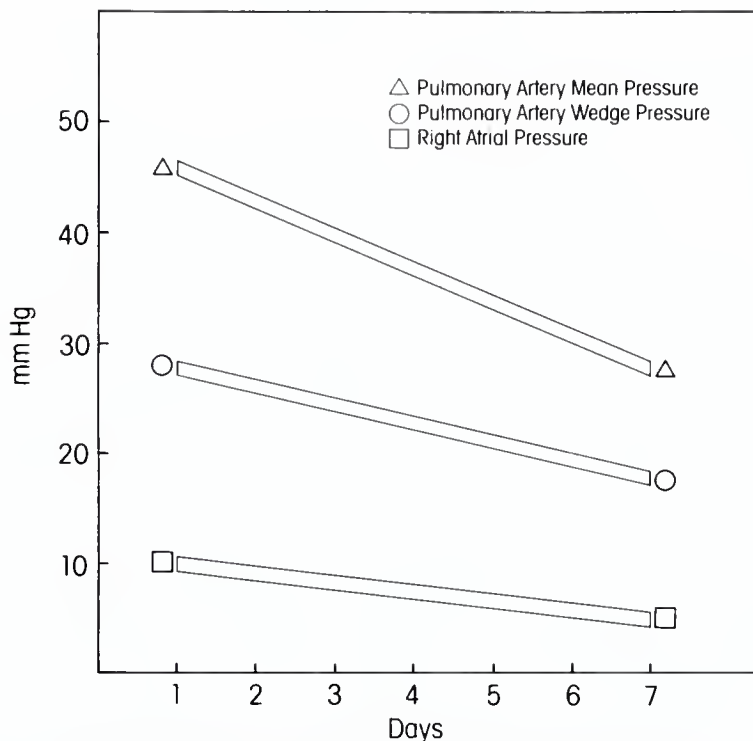
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PRECAUTIONS: Measure serum potassium periodically and add potassium supplements or potassium-sparing diuretics, if necessary. Periodic determinations of other electrolytes are advised in patients treated with high doses or for prolonged periods, particularly in those on low salt diets. Hyperuricemia may occur. Reversible elevations of the BUN and creatinine may occur, especially with dehydration and in patients with renal insufficiency. Bumex may increase urinary calcium excretion. Possibility of effect on glucose metabolism exists. Periodic determinations of blood sugar should be done, particularly in patients with diabetes or suspected latent diabetes.

Patients should be observed regularly for possible occurrence of blood dyscrasias, liver damage or idiosyncratic reactions. Especially in presence of impaired renal function, use of parenterally administered Bumex should be avoided in patients to whom aminoglycoside antibiotics are also being given, except in life-threatening conditions. Drugs with nephrotoxic potential and bumetanide should not be administered simultaneously. Since lithium reduces renal clearance and adds a high risk of lithium toxicity, it should not be given with diuretics. Probenecid should not be administered concurrently with Bumex. Concurrent therapy with indomethacin not recommended. Bumex may potentiate the effects of antihypertensive drugs, necessitating reduction in dosage. Interaction studies in humans have shown no effect on digoxin blood levels. Interaction studies in humans have shown Bumex to have no effect on warfarin metabolism or on plasma prothrombin activity.

Pregnancy: Bumex should be given to a pregnant woman only if the potential benefit justifies the potential risk to the fetus. Bumetanide may be excreted in breast milk.

Pediatric Use: Safety and effectiveness below age 18 not established.

ADVERSE REACTIONS: Muscle cramps, dizziness, hypotension, headache and nausea, and encephalopathy (in patients with preexisting liver disease). Less frequent clinical adverse reactions are weakness, impaired hearing, rash, pruritus, hives, electrocardiogram changes, abdominal pain, arthritic pain, musculoskeletal pain and vomiting. Other clinical adverse reactions are vertigo, chest pain, ear discomfort, fatigue, dehydration, sweating, hyperventilation, dry mouth, upset stomach, renal failure, osteitis, itching, nipple tenderness, diarrhea, premature ejaculation and difficulty maintaining an erection. Laboratory abnormalities reported are hyperuricemia, azotemia, hyperglycemia, increased serum creatinine, hypochloremia, hypokalemia, hyponatremia, and variations in CO₂ content, bicarbonate, phosphorus and calcium. Although manifestations of the pharmacologic action of Bumex, these conditions may become more pronounced by intensive therapy. Diuresis induced by Bumex may also rarely be accompanied by changes in LDH, total serum bilirubin, serum proteins, SGOT, SGPT, alkaline phosphatase, cholesterol, creatinine clearance, deviations in hemoglobin, prothrombin time, hematocrit, platelet counts and differential counts. Increases in urinary glucose and urinary protein have also been seen.

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Oral Administration: The usual total daily dosage is 0.5 to 2.0 mg and in most patients is given as a single dose.
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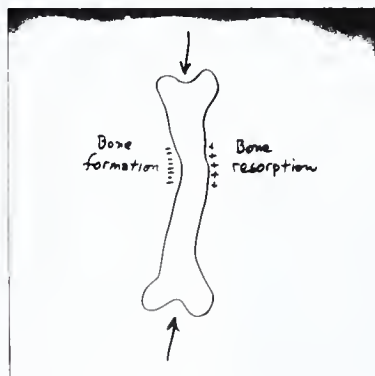
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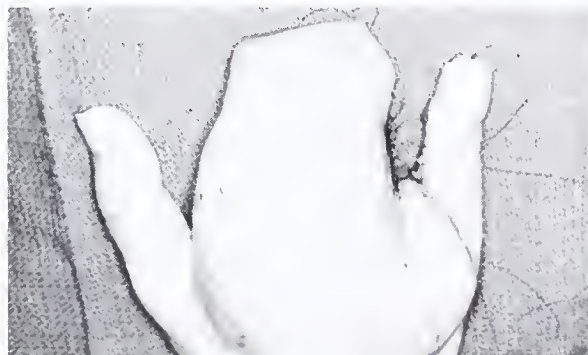


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AIDS IN ARKANSAS

AMS Committee on AIDS

William N. Jones, M.D., Chairman

Update: July 1987

AIDS is a syndrome caused by a transmissible virus, HIV, that threatens to become the major international lethal pandemic disease of the twentieth century.

Since its first observation in the United States in 1981, more than 36,000 cases and 22,000 deaths from AIDS have been reported to the Centers for Disease Control.

It is estimated that over 1.5 million people in the United States are now infected with HIV. Thirty percent of these will develop AIDS in five years. The number of AIDS cases is doubling every thirteen months.

Education and behavior modification are the only tools immediately available to slow the spread of the epidemic for the foreseeable future.

On April 26, 1987, the Arkansas Medical Society House of Delegates unanimously passed a resolution on AIDS. This resolution had been printed in a recent issue of The Journal of the Arkansas Medical Society. The Committee ordered in the resolution has been organized and its members are William N. Jones, Chairman; William L. Mason, Charles R. Henry, Tony A. Flippin, Harold H.

Hedges, Glen F. Baker, James B. Adamson, A. Stuart Fitzhugh, Donald G. Browning, Eugene M. Shelby, Larry D. Ezell, Marlon J. Doucet, Don G. Howard, E. Clinton Texter, Linda A. Markland, Mr. Paul Harris and Mr. Ken LaMastus.

Meetings were held on May 6th and June 6th to begin planning and carrying out the directives of the resolution. The first goal will be to provide educational opportunities for physician members of the Society in their local areas.

If you wish to be a member of a team of physicians in your area in the state who will teach other physicians about all aspects of AIDS, please contact the Society office in Little Rock at (501) 224-8967 or 1 (800) 542-1058 (outside Little Rock).

The AIDS committee would also welcome your participation in the overall endeavor.

In the months to come current information on AIDS will appear in the Journal. Statistics on Arkansas will be a feature of these monthly articles. The current figures are listed below.

Arkansas AIDS Statistics from the Arkansas Department of Health

AIDS cases reported as of June 9, 1987	60
AIDS deaths reported as of June 9, 1987	31
AIDS cases reported from 1/1/87-6/9/87	20

Since January 1, 1987, the Department of Health has performed serological studies on 1,810 patients. Of these, seventy-four were Western Blott positive.

Cases		Race	
Male	57	White	47
Female	3	Black	13

Risk Groups		Age Groups	
*Homo/Bisexual	51	< 20	1
IV Drug User	4	20-29	22
Hemophiliac	0	30-39	23
Transfusion	2	40-49	12
Heterosexual	2	50-59	1
Unknown	1	60 or >	1

Geographic

Patients were widely scattered throughout the state with the number of AIDS cases in a county consistent with the total population of that county.

PHYSICIANS, SCHEDULE SOME TIME FOR YOUR COUNTRY.

Many physicians would like to devote some time to their country in a local Army Reserve unit. We know that making a weekend commitment can be difficult for most physicians. So it is practical for the Army Reserve units to be flexible about time. It's worth discussing.

Incidentally, in addition to satisfying your own desire to serve your country, there are exceptional opportunities to do something totally different from a day-to-day routine. Opportunities to study new areas of medicine, meet new people in your specialty, and be a part of one of the world's most advanced medical teams.

Discuss the opportunities with our Army Medical Personnel Counselor.

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You may wish to explore the challenge of teaching in a major medical center. You may wish to explore the special challenges of your specialty in triage. Certainly you'll be confronted by challenges very different from your daily routine.

You'll also have an opportunity to participate in a number of programs in which you'll be able to exchange views and information with other surgeons from all over the country.

The Army Reserve understands the time demands on a busy physician, so you can count on us to be totally flexible in making time for you to share your specialty with your country. We'll arrange your training program to work with your practice.

To find out about the benefits of serving with a nearby Army Reserve unit, we recommend you call our Army Medical Personnel Counselor.

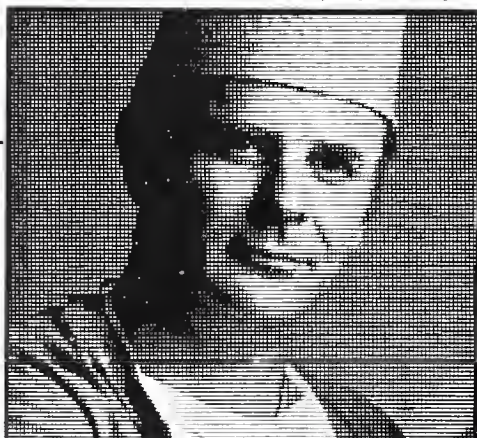
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Degloving Injuries of the Hand

Marcia L. Hixson, M.D. and Michael M. Moore, M.D. *

Severe hand injuries in the industrial setting are fortunately less common now than in years past. This is largely due to improvements in the design of heavy machinery, the addition of special safety features, and in the education of employees in workplace safety practices. Mutilating hand injuries do occur, however, and can range from the amputation of a finger to a crushing roller injury of the entire upper extremity. Many of those workers fortunate enough to have their amputated parts re-implanted or those who choose to live with the loss of a finger may count on the eventual return to gainful employment at their original job. Other injured workers are not so lucky and are left with stiff hands having little useful function. Degloving injuries of the hand and fingers are among the most devastating, in that although the part is not actually torn from the body, the loss of skin and vasculature often necessitates an amputation.

A common example of this type of injury is the ring avulsion in which a ring hangs on a moving object and is pulled violently away from the hand. This results in a stripping of the soft tissues in variable degrees from the skeleton.¹⁻³ This has been classified into a useful system by Urbaniak et al.

Class I Circulation Adequate

These injuries may involve disruption of soft tissues only, or may result in an open fracture or dislocation. The arterial and venous circulation is intact or minimally compromised. Treatment is limited to the management of the bony and/or soft tissue injury. The outcome in these injuries is generally the most favorable. (Fig. 1)

Class II Circulation Inadequate

Along with soft tissue and/or bony injury is found more limb-threatening damage to the arteries, veins, or both. These injuries may seem trivial at first; increasing pallor or duskeness of the finger signals a serious circulatory problem which may require arterial repair, venous repair, or reconstruction requiring the use of vein grafts. (Fig. 2)

Definitive repair of bone and soft tissues may need to be delayed until the circulatory status of the finger has stabilized. The prognosis of these injuries is variable, depending on the amount of tendon, nerve, and bony damage sustained, but may give very good results.

Class III Complete Degloving or Complete Amputation

This injury strips the skeleton of all skin, nerves, vasculature, and occasionally flexor tendons. (Fig. 3) These injuries are the most complex; useful functional recovery is limited as best, and not possible at worst. In the case of amputation, revascularization will require either significant shortening of the digit, or the use of long vein grafts. Return of motion and sensibility will be very limited. The patient's requirements and desires must be balanced with a realistic expectation of recovery. Whereas a young woman may desire to keep the finger for cosmetic reasons, a machinist or a farmer may find the stiffness a great handicap in his work and prefer an amputation.

Less often, all or part of the hand is involved in a degloving injury, usually as a result of being caught in a press or set of rollers. As the worker attempts to free his trapped hand, the soft tissues are stripped from the underlying bony



Figure 1. A Class I Ring avulsion injury with adequate circulation.

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...structures. This is a devastating injury for ... treatment of choice in past years has been primary ... of the denuded portion of the hand. The use of skin grafts alone has been unsuccessful due to the fact that the vasculature has been lost; the phalanges undergo avascular necrosis and the tendons become stiff and adherent. The result is a hand which is "wooden", without movement or sensation. A more functional result might be obtained with an amputation and appropriate prosthetic fitting.

Recently, new techniques have become available which offer some hope of salvage of the injured hand. These techniques are best summarized by Kleinman and involve a complex series of procedures.⁴ An index ray amputation is performed in order to decrease thumb web space narrowing. Disarticulation of the phalanges at the distal interphalangeal joints removes the distal phalanges which would inevitably undergo avascular necrosis. Soft tissue coverage of the exposed bone and tendon is accomplished using a combination of abdominal pedicle and random flaps.⁴⁻⁶

Ideally, surgery should take place as soon as feasible once the danger of infection from the initial wound contamination is passed, generally from four to ten days. The flaps are allowed to mature for approximately three weeks, then released. The result is a mitten-like hand with thumb separate from the remaining syndactylized fingers. Therapy is begun after the incision is healed and consists of gentle active and passive finger and thumb motion. Gains in motion of the fingers must be carefully weighed against disruption of the new vasculature which permits the flap to adhere to the underlying digits. At the end of this healing period, the patient should be able to use the hand in a limited mit-like fashion.

Due to the nature of non-innervated flaps, the patient will have no skin sensation, but will have proprioception and some deep pressure sensation.

For the first year, the flap lacks autonomic vascular control and must be protected from direct sunlight (the skin may burn) and cold (frostbite may occur).⁶ After the flap has



Figure 2. A Class II ring avulsion with venous compromise.

stabilized, at least three to six months, the syndactylized fingers may be separated following the same basic principals of congenital syndactyly release. However, if at the same time the flap is defatted, skin grafts are usually not necessary. The reconstructed fingers are somewhat bulkier than normal. The patient will not have fine manual dexterity and will have to rely on visual control of the hand when attempting to pick up or manipulate objects. In time, this hand becomes a "helping hand" which is functionally and cosmetically superior to a terminal prosthesis. (Fig. 4)

The repair and reconstruction of degloving injuries of the fingers and hand are difficult and time consuming problems. The skill of the surgeon and hand therapists are tested. Motivation and compliance of the patient are essential: depending on the severity of the initial injury, and on its early management, the recovery period may take as long as two years. Patient satisfaction is high, however, and appears to be well worth the time and effort.



Figure 3. A. Class III ring avulsion injury with venous compromise.

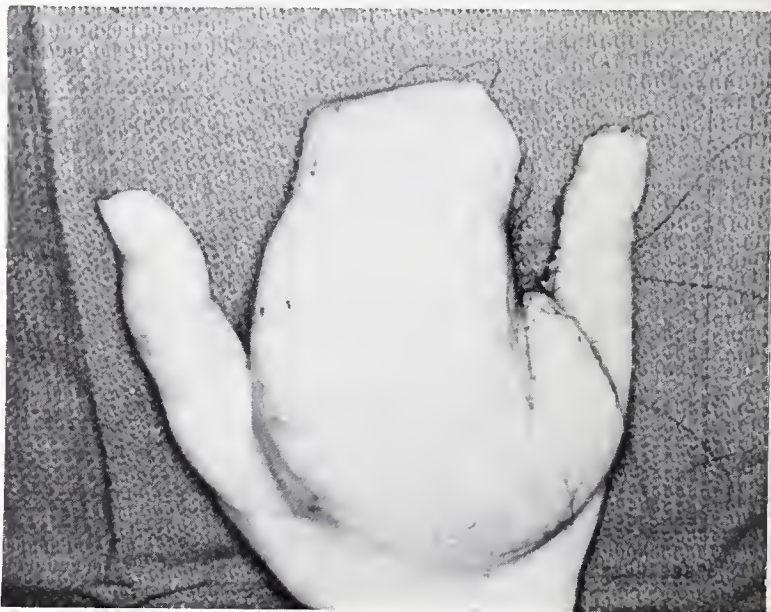


Figure 4. The first stage of hand reconstruction demonstrating the appearance of a mitten hand.

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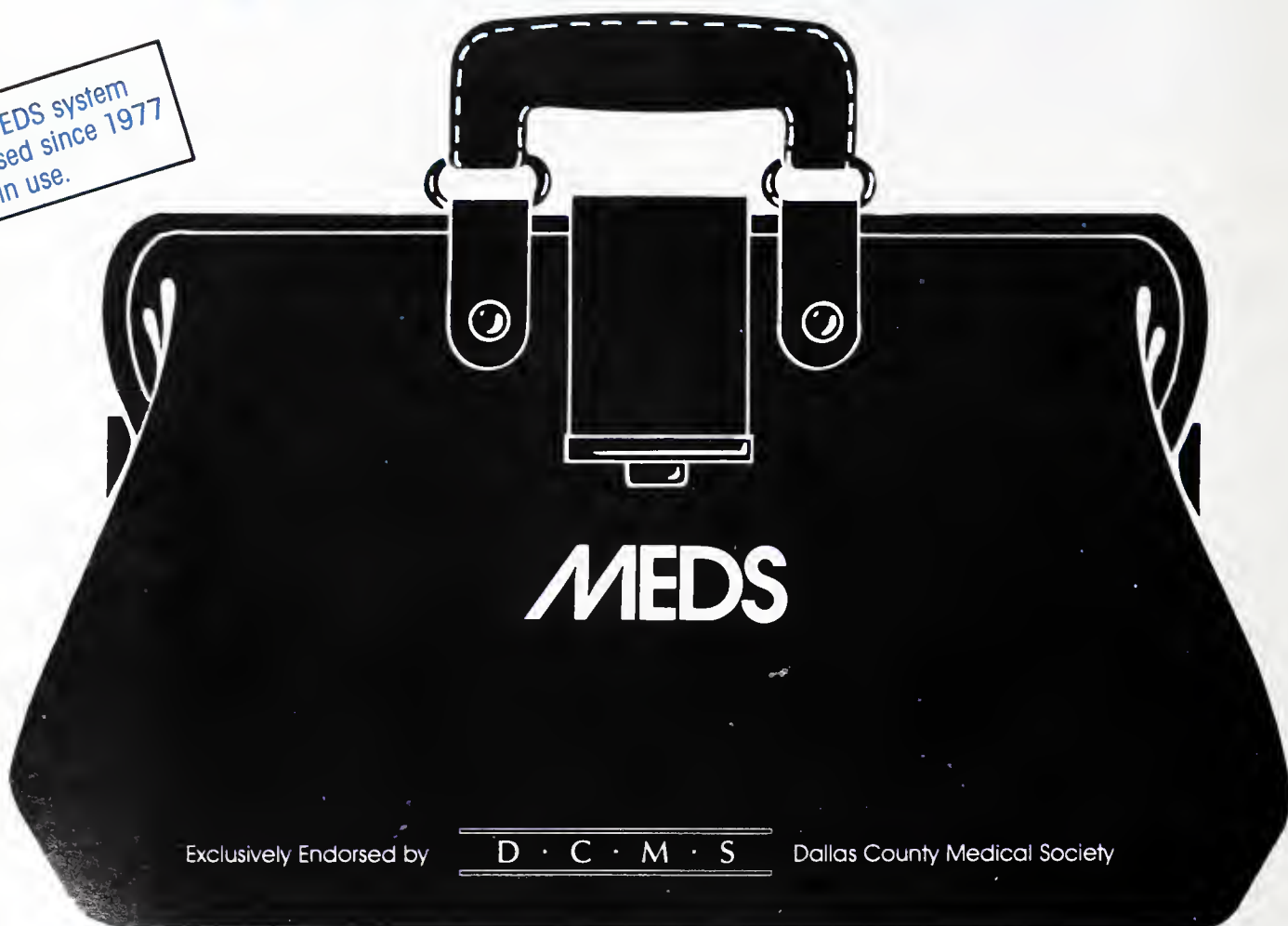
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SUMMARY (FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR)

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DESCRIPTION. INDERAL LA is formulated to provide a sustained release of propranolol hydrochloride. INDERAL LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension, it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first-degree block, 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE. Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY. The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA. Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS. Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing T₄ and reverse T₃, and decreasing T₃.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case, this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL. Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should

be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

CLINICAL LABORATORY TESTS. Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS. Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered a calcium-channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardial contractility or atrioventricular conduction. On rare occasions, the concomitant intravenous use of a beta blocker and verapamil has resulted in serious adverse reactions, especially in patients with severe cardiomyopathy, congestive heart failure or recent myocardial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol.

Ethanol slows the rate of absorption of propranolol.

Phenytoin, phenobarbitone, and rifampin accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased plasma levels of both drugs.

Antipyrine and lidocaine have reduced clearance when used concomitantly with propranolol.

Thyroxine may result in a lower than expected T₃ concentration when used concomitantly with propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY. Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS: INDERAL is excreted in human milk. Caution should be exercised when INDERAL (propranolol HCl) is administered to a nursing woman.

PEDIATRIC USE. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: Bradycardia, congestive heart failure, intensification of AV block, hypotension, paresthesia of hands, thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System: Light-headedness, mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to cataplexy; visual disturbances; hallucinations, vivid dreams, an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics. For immediate formulations, fatigue, lethargy and vivid dreams appear dose related.

Gastrointestinal: Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: Bronchospasm.

Hematologic: Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: Alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL Tablets to INDERAL LA Capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg-for-mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—Dosage must be individualized. The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood-pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—Dosage must be individualized. Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three- to seven-day intervals until optimal response is obtained. Although individual patients may respond at any dosage level, the average optimal dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—Dosage must be individualized. The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximal dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily. PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

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Medico-Legal Aspects of Patient Transfer

Jeffery L. Farmin, M.D., Susan Dufel, M.D., F.A.C.E.P., and Robert E. Harrell, M.D.*

In April 1986, President Reagan signed the Consolidated Omnibus Budget Reconciliation Act of 1985 (COBRA)¹. This law addresses important additions to the Medicare Act which defines the manner in which physicians may authorize the transfer of patients to other medical facilities. Violations of the provisions set forth in this act can evoke penalties of possible suspension or termination of hospital Medicare provider agreements, as well as the imposition of up to \$25,000 in civil fines for physicians and hospitals who violate the law's guidelines.

In order to limit the physician's exposure to the law's sanctions when transferring a patient to another hospital, the following rules must be observed: 1) the benefits of transfer must outweigh the risk to the patient, 2) physician-to-physician contact is necessary, and the receiving physician must agree to accept the patient, 3) copies of medical records and appropriate lab results, electrocardiograms, and x-rays, must accompany the patient, and 4) the transfer must be carried out by qualified personnel, in a proper emergency vehicle, and with the use of appropriate equipment.

In order to gain some historical perspective, there are four commonly held "myths" concerning patient transfer which must first be addressed.

Myth #1

According to the emergency service standards of the Joint Commission on Accreditation of Hospitals (JCAH), hospitals with emergency departments need only "screen" patients before transferring them to another facility.

The new legislation, which went into effect August 1, 1986, requires that a "medical screening examination" be provided to all patients who present themselves to a hospital emergency department. It also details a number of conditions that must be met prior to transferring a patient to another medical facility. The following recommendations

have been provided by legal counsel on behalf of the American College of Emergency Physicians (ACEP) to insure compliance with the law.

All persons presenting to an emergency department of a hospital which receives Medicare reimbursement must be treated alike, regardless of whether they are Medicare or non-Medicare recipients. These individuals must each be examined in order to determine if they are suffering from an emergent medical condition, or are in active labor (active labor being defined as a state of pregnancy that may be jeopardized by transport to another facility, regardless of length of gestation).

The new law does not define what constitutes an "appropriate medical screening examination". In the absence of such a definition, it may be assumed that nationally recognized standards of emergency care (as practiced by board-certified physicians) would be accepted. The law further states that the examination must be made within the confines of the emergency department, and while it does not require that a physician perform the examination, both the emergency physician and the hospital would be held responsible for an inadequate examination by other medical personnel.²

New York state has legislated criminal penalties for any hospital that actively refuses to provide necessary emergency care and treatment "for any reason whatsoever" to a person who presents to a hospital emergency department. According to the law, the hospital is held "strictly liable", meaning that whatever reason a hospital may give

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for emergency care and treatment is irrelevant, and cannot be used as a defense.

In the case of *People v. Flushing Hospital & Medical Center*, an 89-year old woman was transferred from a nursing home to a private hospital at the instruction of her physician. Upon arrival at the hospital, the ambulance crew was met at the door by a nurse who advised the ambulance crew to take the patient to another hospital as there were no beds available at the Flushing Hospital and Medical Center. The patient was taken to another hospital where she died a few hours later from congestive heart failure. In this test case, the statute was examined and the responsibility of the hospitals made clear. The fact that there were no beds available at the first hospital could not be used as a defense and did not relieve the hospital of its obligation to provide emergency care. Additionally, Flushing Hospital and Medical Center was found liable for not performing an adequate "medical screening examination" on the patient.³

Myth #2

Before transferring a patient, contact with the receiving hospital is unnecessary if appropriate medical records and x-rays are sent.

COBRA also stipulates that whenever possible, obtain the approval of the receiving hospital prior to transfer of the patient. This should ideally be in the form of physician-to-physician contact.

The need for this stipulation is illustrated by *Hickson v. Martinez*, in which Dr. Martinez evaluated a two-year-old boy with a temperature of 101 degrees, petechiae, unequal pupils, and who had had a grand mal seizure prior to arrival at the hospital. Dr. Martinez decided that the boy needed to be seen by a pediatrician and recommended transfer to a second hospital. The child was to be taken to the second hospital by his grandmother, resulting in a 30 minute delay. Upon arrival at the second hospital, no one was expecting them, and a pediatrician had to be called. While awaiting the pediatrician, the child began to have episodes of apnea. When the pediatrician arrived, he decided that the child had increased intracranial pressure and needed a lumbar puncture, which necessitated transferring the child to a children's hospital. This was accomplished via ambulance transfer with a crew of two EMTs. No treatment had yet been rendered except for the application of oxygen (no IV nor medications were started). When the child left the second hospital, he had a pulse of 120, a blood pressure of 60/40, and respirations were moderately rapid and shallow. On arrival at the children's hospital, the child had agonal respirations, a pulse of 50, and a systolic blood pressure of 60 by palpation. Despite aggressive resuscitative attempts at the third hospital, the child was pronounced dead the next day from meningitis and disseminated meningococemia. The parents filed suit against all involved, citing the fact that

the first transfer was not approved in advance, resulting in dangerous additional delay.³

Myth #3

Patients may be transferred to the receiving facility by any available means of transportation.

The new law requires that the transfer be carried out by appropriate means of transport and with whatever trained personnel and specialized equipment that may be necessary. Failure to comply with this requirement constitutes an "inappropriate transfer", which is subject to the aforementioned suspension of Medicare provisions and a fine of up to \$25,000.

In *Hickson v. Martinez*, the ambulance company was also named as a defendant for "accepting care and treatment of the child when it was not qualified to do so". The jury found in favor of the ambulance company, and this decision was upheld by the appellate court which ruled that "appropriate medical personnel", as alleged by the plaintiff, did not pertain to the EMTs, but rather to a physician or nurse. The ruling implied that not only should the patient have been accompanied by a physician or nurse, but that the decision as to who constitutes qualified transport personnel belongs in the hands of the transferring physician, and not the EMTs. This entire case has yet to be fully resolved in court.³

Myth #4

Hospitals cannot be found liable for transfer of patients that are made for economic reasons.

Another of the requirements of the new law is that the transfer comply with all requirements of the U.S. Department of Health and Human Services. This specifically refers to the "transfer for economic reasons", which is also considered an inappropriate transfer, and subject to suspension of Medicare provisions and a fine up to \$25,000.

In *Thompson v. Sun City Community Hospital*, a 13-year-old boy had been injured in an automobile accident and was taken to a nearby private hospital by ambulance. While there, the emergency department physician obtained consultation from the appropriate specialist who unanimously agreed that the patient required emergency surgery. The emergency physician, however, was required (by hospital administrative policy) to transfer the patient to the county hospital. The physician stated in court that the patient was "medically transferable", but the decision to transfer the patient was made for "economic reasons". Hospital administrators readily admitted that this indeed was the reason for the transfer. The complaints against the emergency physician and the consultants were dropped, as they had been willing to provide care.

In regard to the transfer of such patients, the court cited the standards of the Joint Commission on the Accreditation of Hospitals concerning emergency services: "No patient should arbitrarily be transferred if the hospital where he was initially seen has means for adequate care of his problem." The court pointed out that among the "arbitrary" grounds found inappropriate by the Joint Commission (in its standards concerning patients' rights) was the consideration of the source of payment for the patient's care.^{4,5}

JCAH Guidelines

The current JCAH standards for patient transfer as outlined in the 1987 Accreditation Manual for Hospitals are as follows:

- 1) All hospitals are capable of instituting basic and advanced life support measures that are essential in stabilizing a patient's condition and prevent further deterioration of the condition of any patient being transferred.
- 2) If the hospital where the patient is initially seen has the capabilities for treating the patient's condition, then that patient shall not be arbitrarily transferred to another hospital. In the event that extenuating conditions exist that make transfer necessary, they should be well documented in the patient's record.
 - (a) Patient transfer is not initiated until the receiving facility has consented to accept the patient and the patient is considered adequately stabilized for transport.
 - (b) All pertinent medical information will accompany the patient during transfer, and responsibility for the patient during transfer is established beforehand.⁶

ACEP Guidelines

The following guidelines were developed by the American College of Emergency Physicians (ACEP) Government Affairs Committee and published in the August 1985 issue of the *Annals of Emergency Medicine*.

- 1) "The patient should be transferred to a facility that is appropriate to the medical needs of the patient. The facility should have adequate space and personnel available to care for the patient."
- 2) "A physician or other responsible person at the receiving hospital must agree to accept the patient prior to the transfer taking place. Acceptable 'other responsible persons' should be medical personnel who are designated by the hospital and given the authority to accept the transfer of the patient. The patient transfer should not be refused by the receiving hospital when the transfer is indicated and the receiving hospital has the capability and/or responsibility to provide care to the patient."
- 3) "Communication between responsible persons at the transferring and receiving hospitals for purposes of

exchanging clinical information should occur prior to transfer. Ideally this communication should take place between physicians."

- 4) "Once a patient is accepted for transfer, an appropriate medical summary and other records (including laboratory results and copies of electrocardiograms, radiographs, and other diagnostic tests) should be sent with the patient."
- 5) "A patient should be transferred in a vehicle that is staffed by appropriately trained personnel and that contains life support equipment. It may be necessary for additional specialized personnel from the transferring or receiving hospital to accompany the patient."

ACEP has also established basic guidelines concerning the initial stabilization and preparation of patients prior to transport. "Stabilization includes adequate evaluation and initiation of treatment to assure that transfer of a patient will not, within reasonable medical probability, result in death or loss or serious impairment of bodily functions, parts, or organs."⁷ Evaluation and treatment of patients prior to transfer should include the following: 1) An adequate airway and ventilation should be established; 2) Hemorrhage should be controlled; 3) The patient's spine and/or fractures should be stabilized or splinted as necessary; 4) Establishment and maintenance of adequate intravenous access for fluid administration; 5) Volume replacement should be initiated with blood or appropriate fluids; 6) Stabilization of the patient's vital signs (including blood pressure, pulse, respiration, and urinary output, if indicated) to the extent of maintaining good perfusion. The patient should be observed long enough to determine that the vital signs will remain stable and will not deteriorate during transfer.

ACEP also addresses the issue of transfers that may seem medically inappropriate, but are made at the request of the patient, or those responsible for the patient. In that circumstance, the physician should make every effort to stabilize the patient prior to transfer, and is obligated to explain the medical risks involved. There should also be an informed consent form signed by the patient (or those responsible for the patient) and the physician.⁷

Both the ACEP guidelines and the legal precedents mentioned above stipulate that the patient be transported by "appropriately trained personnel in a vehicle that contains life support equipment". Currently in Arkansas, there are three types of transportation available: 1) the basic E.M.T. unit, which is not equipped or staffed to provide intravenous access, defibrillation, intubation or cardiac monitoring; 2) the paramedic unit, which can provide all the above modalities, but which is not available in all areas of the state; and 3) helicopter ambulances staffed by a physician and a registered nurse. It is mandatory that whatever mode of transport is chosen must have a radio capable of maintaining contact with the transferring and/or receiving hospital at all times during transport.

When making any patient transfer, one should carefully determine what level of transport is required, and if the appropriate type is not available, then improvisation may be necessary. This may include carrying additional equipment not ordinarily kept on the vehicle, and/or providing additional specialized personnel, such as physicians, RNs, or respiratory therapists.

In summary, it may seem that proper patient transfer can be an extremely complicated procedure. However, in order to limit one's exposure to legal sanctions, good medical care is the best prevention. Physicians who continue to render the highest quality care without consideration of a patient's ability to pay should meet or exceed the new law's requirements.

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ELECTROCARDIOGRAM OF THE MONTH

Bob Banister, M.D.
John W. Watson, M.D.
UAMSC - LRVA Division
of Cardiology

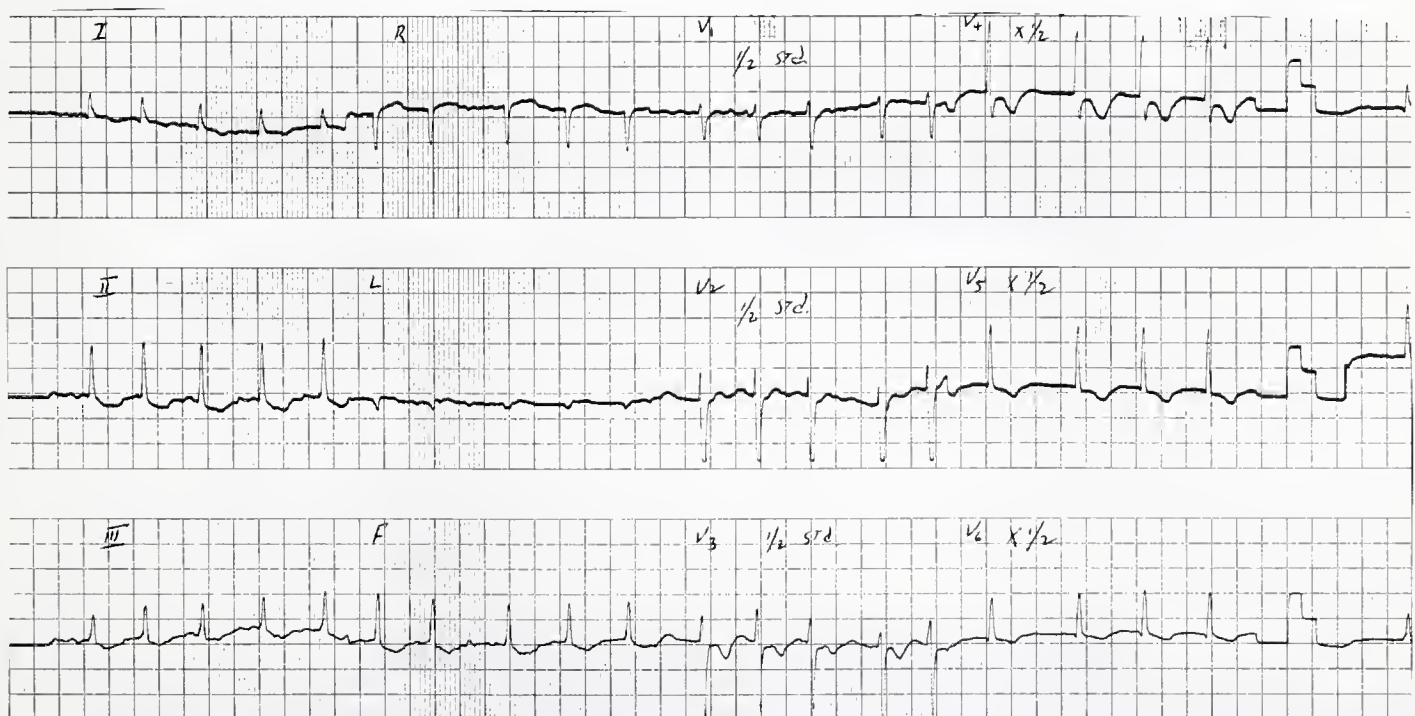
CLINICAL HISTORY:

C. D. is a 40-year-old man who presented because of shortness of breath and palpitations. His physical examination showed an irregular irregularity of the pulse, crackles in the lungs, and a grade 2 or 6 holosystolic murmur at the cardiac apex. His ECG is shown. What do you think?

DISCUSSION:

The mechanism is atrial fibrillation with ventricular response about 125/minute. Voltage and ST-T changes suggest LVH. The murmur plus the evidence of LVH and the atrial fibrillation all serve to call attention to his mitral valve. Other information potentially of value to the determination of the etiology of his heart disease could be derived from a more complete history and physical, a chest film, and perhaps an echocardiogram.

The editor wishes to thank Dr. Banister of Conway for his assistance with this month's ECG.



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Esophageal Carcinoma: A Case Report

Bill L. Trantum, M.D. W. Ducote Haynes, M.D., and
Carlos A. Araoz, M.D.*

ABSTRACT

A case of carcinoma to the distal portion of the mid-esophagus is presented. The patient was successfully treated with chemotherapy and radiation simultaneously, plus hyperalimentation with nearly 100% activity resumed. Since the principal treatment modalities are generally surgery and/or radiotherapy, the success of this case prompted a look at reports of radiotherapy/chemotherapy combinations as cited in the literature. Continued investigation is necessary to determine the effectiveness of this treatment because this combination therapy may provide the optimum control of the disease.

INTRODUCTION

Traditionally, cancer of the esophagus has been considered a surgical disease. Surgery has been performed to remove all of the disease, and in some cases after the surgery has been performed, radiotherapy has been used to attempt to eradicate a minimal residual disease. However, newer developments in chemotherapy and radiotherapy have had an altering effect on this standard treatment plan. We report a man with esophageal carcinoma who shows no symptoms of the disease after being given a combination of chemotherapy and radiotherapy. This case is significant because it suggests that chemotherapy and radiotherapy, when given simultaneously, may provide the best treatment of the disease in some patients and that surgery is not always recommended.

CASE REPORT

A 58-year-old male presented with dysphagia. At the time of admission, he could swallow liquids, but no solids. At 165 pounds, he had not yet begun to lose weight as is generally expected in cancer of the esophagus. The radio-

graphic studies upon the patient's admission reveal extensive distortion of the barium column at the mid- and upper esophagus. Biopsy showed squamous carcinoma of the esophagus. The tumor invaded the muscularis.¹

After the diagnosis was confirmed, he was treated with a combination of 5-fluorouracil infusion over five days and a single dose of platinum. Monthly doses were repeated for a period of four months. Radiotherapy was started simultaneously. He was treated with anterior and posterior portals. In this particular case, 4000 rads were given in sessions of 200 a day for four weeks. Then a lateral field was used to exclude most of the heart as well as the spinal cord. The total radiation was 5000 rads.

At the outset of treatment, the patient was started on hyperalimentation to avoid the weight loss that usually occurs with a combined treatment of radiation and chemotherapy. As the patient was able to eat, hyperalimentation was interrupted; he was discharged except for monthly treatments for four months. He continued to gain weight and was back to work 100% of the time with no residual symptoms at the conclusion of the four months.

The patient's follow-up included the biopsies which were taken four months after the original treatment. The follow-up biopsy did not show any residual tumor.

DISCUSSION

This case reinforces other reports documenting that a non-surgical treatment for esophageal carcinoma may be successful, and that a combination of radiation and chemotherapy may offer the best treatment.²⁻⁶ The treatment of esophageal carcinoma evolved from surgery alone, to surgery and radiotherapy, to surgery/radiotherapy/ chemotherapy combined, and finally to the present treatment of chemotherapy and radiotherapy combined. Since esophagectomy is such a major surgical procedure, it seems encouraging to us to obtain the same degree of control or cure of the disease with chemotherapy and radiotherapy

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without the morbidity of surgery. It may be appropriate to avoid surgical treatment for some patients. It is important to avoid surgery if it is shown that the same or better results can occur without the morbidity and mortality of esophagectomy.

With a combination of radiotherapy and chemotherapy at Wayne State University, nine of twenty-three resected patients had a curative resection, and local recurrence decreased to thirteen percent.⁵ In another study, Wayne State University was able to achieve excellent palliation with dysphagia that relieved at least temporarily fifty-seven or sixty-two patients following treatment with chemotherapy, radiotherapy, and surgery therapy.²

Even though palliation may be achieved, the survival rate for esophageal cancer is poor. Reviews indicate that the five-year survival following radical radiotherapy is six percent, and four percent following surgery alone.⁷⁻⁸ Reports also indicate that the one- and two-year survival rates for surgery are not optimistic, dropping from eighteen percent to nine percent the second year.⁷⁻⁸ When radiotherapy and surgery are combined, the five-year survival is still only slightly higher than five percent.⁹ In a study of 444 patients who were treated only with radiotherapy, the five-year survival rate was nine percent.¹⁰ These results indicate that an optimum treatment has not yet been proven.

Investigation into curative treatments must continue, and a combination of chemotherapy and radiotherapy treatment offers some hope.

Acknowledgment

The authors wish to thank Marjorie McMinn for editorial assistance in the preparation of this paper.

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“The Crooked Straight”: Distal Radial Remodeling

Charles C. Schock, M.D.

An eight-year old boy was presented to us with an angulated distal radial fracture which had been unrecognized for approximately two and one-half weeks. It was thought to be still reducible. The angulation was measured as a 32-degree volar apex. When a severe strep throat prevented administration of anesthesia for another week a decision was made to accept the existing position and to count on remodeling to ultimately correct the angulation. That decision was based on the observations and evidence presented here. While it is of course ideal in the early stages of a fracture to reduce the fragments in as near an anatomic position as possible, there does come a time when attempting to do so is difficult and traumatic, and if nature will eventually correct the angulation, it may be recruited as an ally.

But how much angulation can be corrected by nature, at what rate, and in what age group? Furthermore, the specific location and anatomy of the fracture and the ultimate effect of a given residual deformity on motion will necessarily influence the decision. Angulation of the distal radius in either radial or ulnar deviation of more than just a few degrees will not remodel satisfactorily according to Blount¹ but angulation in the plane of flexion-extension will remodel to a much greater extent.

An existing residual volar angulation (volar apex) will cause a decrease in pronation due to a prominence of the radius on the volar surface which will occupy the space adjacent to the ulna as full pronation is approached. Rang² reported on the effects of angulation of the radius on pronation. He noted for every ten degrees of residual volar angulation, there was an associated decrease of approximately twenty degrees from full pronation. This tendency is accentuated the more the apex is separated from the wrist joint (Figure 1). Furthermore, for a given degree of volar

apex, a much larger space occupying mass is produced in the path of pronation at the middle-distal one-third junction compared to that near the wrist (Figure 2a, 2b). If there happens to be a volar apical deformity of the ulna, this effect is further accentuated. Residual dorsal apex of the distal radius appears to cause much less in the way of rotational loss, but this is associated with a more pronounced visible deformity and hence is generally avoided.

Although loss of pronation of a mild or moderate degree can be compensated for by elbow motion³, above forty degrees would border on a significant loss, and hence residual volar apex of greater than twenty degrees would appear to be clearly undesirable. The question to be answered in a growing child is how much immediate post fracture deformity can one accept in order to ultimately produce a volar angulation which is within acceptable limits, taking into account the effects of remodeling.

In considering remodeling, three distinct processes need to be kept in mind and evaluated separately. The first is the automatic straightening effect which is provided by progressively increased length of the bone. “Straight” bone

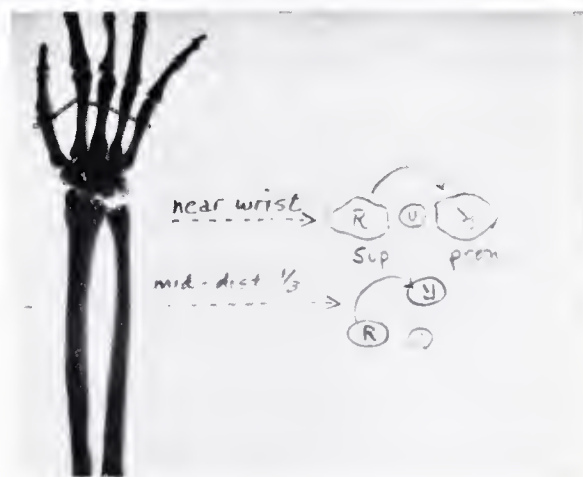
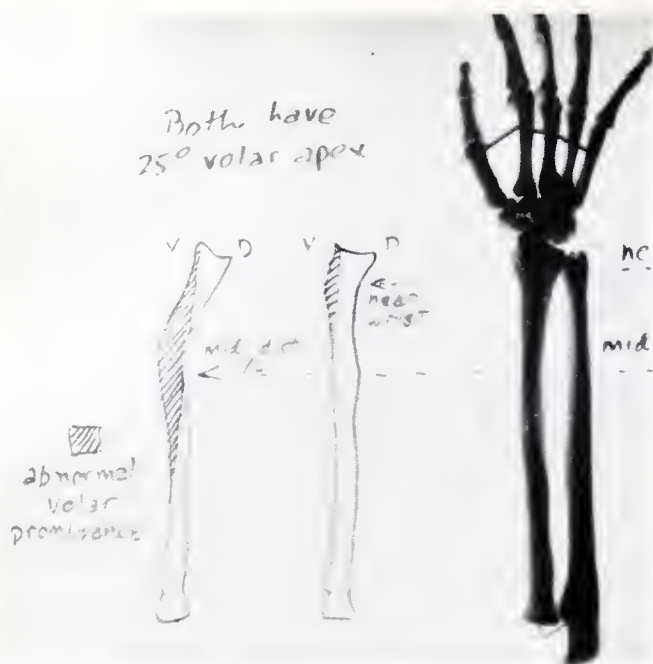


Figure 1. The radius undergoes near 180° rotation over its entire length. In full pronation its volar surface directly faces the ulna near mid-shaft, but this does not occur near the wrist.



Figures 2a and 2b. For an arbitrary 25° volar apex, (for example), it is noted that a larger volar prominence is produced at the middle-distal 1/3 junction (a), and that at the middle-distal 1/3 junction the prominence tends more to impinge on the ulna in pronation (b).

added onto the end of “crooked” bone reduces the total residual angle of deformity.

Second is the ability of the epiphyseal plate to provide compensatory angulation to correct an existing malunion. Fribert, in a very exhaustive series of three articles in *Acta Orthopaedica Scandinavica*, noted a very striking tendency of the distal radial epiphysis to reangulate toward the normal, especially following a fracture healed in volar apex^{4,5,6} In growing children, virtually complete redirection of the distal articular surface of the radius achieved normal orientation if the fractures present had a volar apex of up to thirty-five degrees. Complete correction sometimes took three to four years, and the more markedly angulated fractures could show between ten and fifteen degrees correction per year. Correction during the first year appeared to be greater than in subsequent years, giving rise to a hypothesis of a constant percentage correction rather than an absolute amount of correction per year.

The correction in the dorso-volar plane appears to be due to the propensity of different parts of the epiphyseal plate to grow at a rate which is responsive to the compressive

loading of the local area (Huetter-Volkmann Law) (Figure 3). Figure 4 shows an idealized hand and wrist force diagram. Weight (W), flexor tendon force (T) and joint reaction force (J) are illustrated as affecting the hand (pictured in supination). Equilibrium of these forces is seen in the force triangle. The wrist joint is therefore loaded through its center of curvature in a direction which slightly overloads the dorsal aspect of the epiphyseal plate versus the volar aspect (Figure 5). Epiphyseal plate growth results in a slightly palmar flexed position of the distal radial articular surface in response to the time-averaged joint reaction force, since flexor strength predominates over extensor strength. When this angle is lost in a volarly angulated radial fracture, the force direction is changed, as illustrated in the second diagram (Figure 6), with a greater overloading of the dorsal aspect of the epiphyseal plate (Figure 7). By the H-V curve (Figure 4), the dorsal aspect of the epiphyseal plate will grow more rapidly, causing gradual correction of the angle. Similar corrective forces exist in all joints and are particularly prominent in varus-valgus considerations of the knee. It appears that an application of the Huetter-Volkmann Law is associated with Blount’s disease of the proximal tibial epiphysis, in that when the medial epiphyseal cartilage is compressed beyond the break in the Huetter-Volkmann curve (dotted line in Figure 3) the resulting decreased growth medially gives rise to an increasing varus deformity.

It would appear then from these considerations that residual dorsal or volar angulation of the distal radius in a growing child with at least three to four years of growth remaining could be tolerated up to the range of thirty-five degrees. Beyond this, the temporary decrease in pronation of the forearm would perhaps cause soft tissue contracture to the point of preventing the regaining of lost pronation with remodeling. Visible deformity for angulations beyond

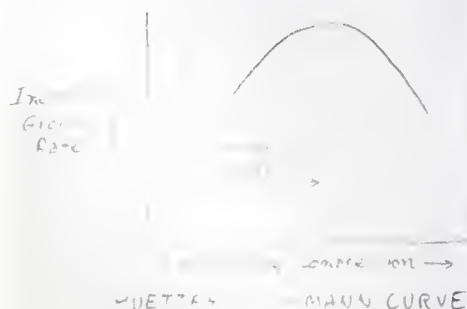


Figure 3. Epiphyseal cartilage growth rate normally increases with increasing compression, up to a point (dotted line). Further compression beyond this point results in decreased growth rate.

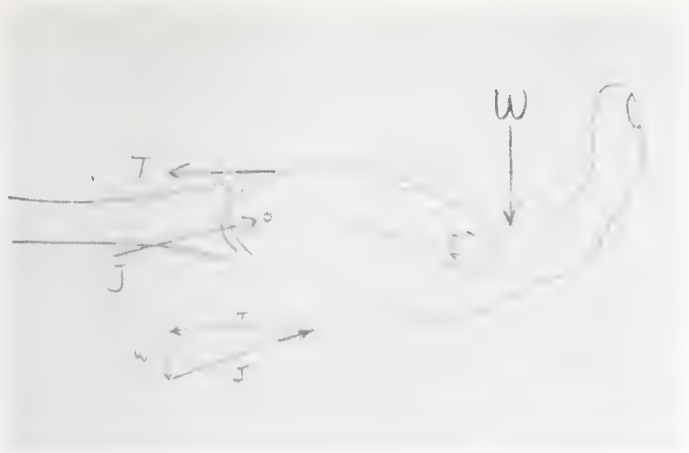


Figure 4.

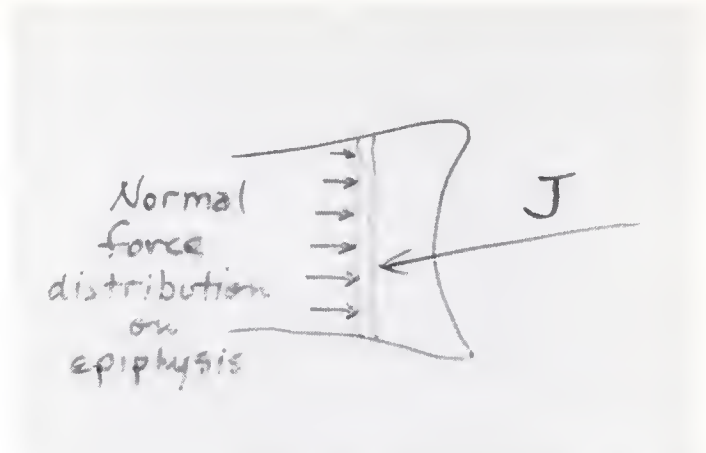


Figure 5.

thirty-five degrees might well also dictate a corrective osteotomy.

A third factor involved in bony remodeling is the degree of resorption and formation of the shaft of the bone, causing a certain amount of drift of the cortex. This factor is illustrated in tracings of x-rays of a proximal radial fracture in an eight-year old patient (Figure 8). Initial bayonnet apposition has resulted in union, and a resorption of portions of the cortex and formation of new bone in other areas resulted in a marked change in cortical configuration ten months later. Theoretical studies of bone resorption and formation⁷ reveals that bone formation occurs at a rate of approximately one micron per day, which translate out to approximately one third of a centimeter per year. Bone resorption can go at a much faster rate, sometimes up to one hundred microns per day.

Bone formation and resorption of the cortex is controlled by a piezoelectric effect on the cortex which is generated by bending in compression or in tension. An angulated bone (Figure 9) will generate negative potential on the concave side causing bone deposition, and a positive potential on the convex side causing bone resorption. Similar load-generated potentials within Haversian canals (negative potential on the walls of Haversian systems and positive potential on the forward cutting edge) does tend to

direct the osteon in an orientation which parallels the compressive force affecting the bone. At any rate, in a fracture which heals with residual angulation, bone will tend to be resorbed over the convexity and formed in concavity. Since children form bone at about double the rate of adults, this process will of course be accelerated in children.

In point of practice then, it remains a good policy to attempt to reduce all fractures as anatomically as possible. In the specific case where consideration needs to be given toward possible operative intervention to reduce an existing malunion, it is hoped that these guidelines will be helpful in decision-making. In children with three to four years of rapid growth remaining (age ten is a conservatively safe estimate), deformities of up to thirty-five degrees can be expected to remodel if close to the radial epiphysis. This effect decreases proportionately as the junction of the middle and distal third of the radius is approached. Radial and ulnar deviation remodel within a much lower limit, and dorsal angulation is tolerated at a lower level due to visible deformity.

The remarkable ability of the human to compensate for many of the accidents of chance inspires an admiration for the Maker who equipped his human creatures to survive and function as a species through the eons prior to medical intervention in fracture healing.

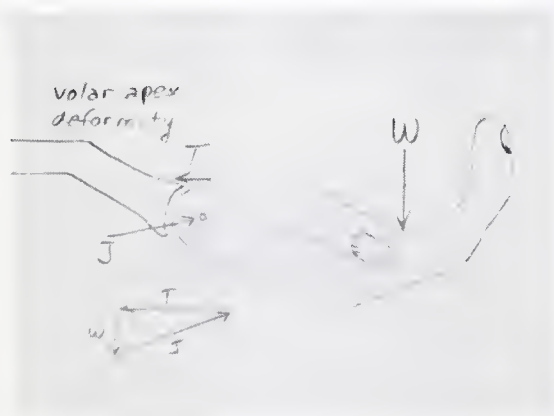


Figure 6.

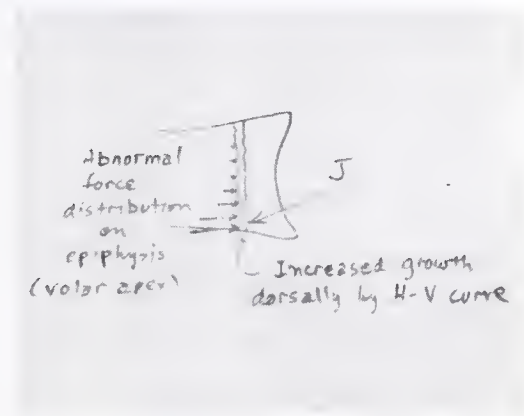


Figure 7.



Figure 8.



Figure 9.

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1987-1988

Committees Appointed by Society President

Committee on Cancer Control

	Term Expires
James Bledsoe, 6 Halsted Circle, Rogers 72756	1988
Jerry Morgan, North Buerkle Road Stuttgart 72160	1988
Robert H. Janes, Jr., 1500 Dodson, Fort Smith 72901	1988
Kent Westbrook, 4301 West Markham, Slot 520, Little Rock 72205 - Chairman	1989
Joe B. Crumpler, Jr., 3105 West Main Place, Russellville 72801	1990
Ronald D. Hardin, 107 Medical Towers Building, Little Rock 72205	1990
Jean C. Gladden, Post Office Box 1118, Harrison 72602	1990

Committee on Medical Legislation

W. Payton Kolb, 230 Medical Towers Building, Little Rock 72205	1988
Wayne G. Elliott, 443 West Oak, El Dorado 71730	1988
Ralph F. Joseph, Post Office Box 109, Walnut Ridge 72476	1988
Merrill J. Osborne, 10th and Highland, Suite C Blytheville 72315	1988
Morriss M. Henry, 204 South East Street, Fayetteville 72701	1989
Charles H. Rodgers, 4202 South University, Little Rock 72204	1989
James R. Weber, Post Office Box 188, Jacksonville 72076 - Chairman	1990
Joe Verser, Post Office Box 106, Harrisburg 72432	1990
Richard K. Levitt, 510 Hilltop Drive, Russellville 72801	1990
Marvin Leibovich, 9600 I-630, Exit 7, Emergency Dept, Little Rock 72205	1990
Don Howard, 110 North Clifton, Fordyce 71742	1990
Kelly Meyer, Post Office Box 540, Russellville 72801	1990
Asa Crow, #1 Medical Drive, Paragould 72450	1990

James L. Hagler, 500 S. University, Little Rock 72205	1990
Harold H. Chakales, #5 St. Vincent, Suite 300, Little Rock 72205	1990
C. C. Long, 7119 South "S" Circle, Fort Smith 72903	1990

Ex-Officio Member: Auxiliary Legislative Chairman

Sub-Committee on National Legislation

W. P. (Pat) Phillips, Post Office Box 3507, Fort Smith 72913	1988
Kelly Meyer, Post Office Box 540, Russellville 72801	1988
Charles H. Rodgers, 4202 South University, Little Rock 72204	1988
William E. Golden, 4301 W. Markham, Slot 641, Little Rock 72201	1988
W. Payton Kolb, 230 Medical Towers Building, Little Rock 72205	1989
R. Wendell Ross, 1120 Lexington Avenue, Fort Smith 72901	1989
Rhys A. Williams, Post Office Box 1118, Harrison 72601	1990
James M. Kolb, Jr., 305 Skyline Drive, Russellville 72801	1990
Asa A. Crow, #1 Medical Drive, Paragould 72450 - Chairman	1990

Committee on Public Health

Ben N. Saltzman, 4815 West Markham, Little Rock 72205	1988
Rex Ramsay, Post Office Box 300, Bauxite 72011	1988
Don Howard, 110 Clifton, Fordyce 71742 - Chairman	1989
Wayne G. Elliott, 443 West Oak, El Dorado 71730	1989
A. S. Fitzhugh, 4815 West Markham, Little Rock 72205	1990
Alan R. Storeygard, Post Office Box 459, Jacksonville 72076	1989
Sam Shultz, 4815 West Markham, Little Rock 72205	1990

Sub-Committee on Maternal and Child Welfare

E. A. Shaneyfelt, Post Office Box 630, Manila 72442	1988
Rex Ramsay, Post Office Box 300, Bauxite 72011	1988
Frank C. Miller, 4301 W. Markham, Slot 518, Little Rock 72205	1988
W. Wayne Workman, 527 North 6th, Blytheville 72315	1988
Robert H. Fiser, Jr., Post Office Box 5058, Little Rock 72225 - Chairman	1989
Calvin Bracy, 1301 West 43rd, Pine Bluff 71603	1989

Committee on Continuing Medical Education

John M. Hestir, Post Office Drawer 512, DeWitt 72042 - Chairman FP	1988
Warren M. Douglas, 260 Medical Towers, Little Rock 72205 OS (PATH)	1990
Robert D. Dickens, 750 Medical Towers, Little Rock 72205 OS (RAD)	1990
Charles D. Mabry, 1801 West 40th, Suite 7-B, Pine Bluff 71603 ACACS	1989
I. Dodd Wilson, 4301 West Markham, Little Rock 72205 UACM	1989
R. Wendell Ross, 1120 Lexington Avenue, Fort Smith 72901 AC,ACS	1989
Walter O'Neal, 9600 Interstate 630, Exit 7, Little Rock 72205 ACP	1989

Committee on Hospitals

Robert B. Benafield, P. O. Box 2181, Little Rock 72203	1988
G. Max Thorn, #2 St. Vincent Circle, Little Rock 72205	1988
Rhys A. Williams, Post Office Box 1118, Harrison 72601	1988
Ralph G. Kramer, 1311 South "I", Fort Smith 72901	1988
Jerry R. Stewart, P. O. Box 3528, Fort Smith 729131	1989
Gerald A. Stolz, Jr., Post Office Box 925, Russellville 72801	1990
Robert Elliott, 1300 South Main, Searcy 72143	1990
Fay M. Sloan, 9601 Lile Drive, Plaza A, Little Rock 72205	1990

Committee on Public Relations

T. E. Townsend, 1420 West 43rd, Pine Bluff 71603	1988
Raymond V. Biondo, Post Office Box 921, North Little Rock 72115	1988
Charles Logan, 500 South University, Little Rock 72205	1988

Ken Lilly, Jr., 421 North Spruce, Little Rock 72205 (Medical Student)	1988
Charles J. Graham, 800 Marshall, Little Rock 72202 (Resident)	1988
Milton Deneke, P. O. Box 687, West Memphis 72301 - Chairman	1989
Ronald J. Bracken, 1401 Malvern, Suite 100, Hot Springs 71901	1989
John S. Lambert, 501 Virginia Drive, Batesville 72501	1989
A. C. Bradford, P. O. Box 3528, Fort Smith 72913	1990
David L. Rogers, 767 West North, Fayetteville 72701	1990

Ex-Officio Members:

Mrs. James L Gardner #3 North Point Lookout Circle, Hot Springs 71913
Mrs. Gordon Oates, 485 Valley Club Circle, Little Rock 72212

Sub-Committee on Liasion with Auxiliary

Ramon Lopez, Post Office 1360, Newport 72112	1988
Deno P. Pappas, 101 Whittington, Hot Springs 71901	1988
Asa Crow, #1 Medical Drive, Paragould 72450	1989
James Gardner, 125 Greenwood, Hot Springs 71901 - Chairman	1989
Milton D. Deneke, Post Office Box 687, West Memphis 72301	1990
J. Larry Lawson, #1 Medical Drive, Paragould 72450	1990

Sub-Committee on State Health and Medical Resources for Civil Defense

J. Ryland Mundie, 4301 West Markham, Slot 584, Little Rock 72205 - Chairman	1988
Glenn V. Dalrymple, 1100 Medical Towers Building, Little Rock 72205	1988
Joe H. Stallings, 404 Creath, Jonesboro 72401	1989
Eugene M. Shelby, 100 Whittington, Hot Springs 71901	1990
Robert Valentine, 2800 Percy Machin Drive, North Little Rock 72114	1990

Sub-Committee on Liaison with Vocational Rehabilitation

Karlton H. Kemp, 408 Hazel, Texarkana 75502	1988
Ramon Lopez, Post Office Box 1360, Newport 72112	1988
F. Patrick Maloney, 4301 West Markham, Slot 602, Little Rock 72205	1989

James Crenshaw, 320 Doctors Park Building, Little Rock 72205	1989	Malvern 72104	1990
Joe Jett, #5 St. Vincent Circle, #401, Little Rock 72205	1990	Harold H. Hedges, 424 N. University, Little Rock 72205	1990
Henrik Madsen, II, 311 Whittington, Hot Springs 71901	1990	Robert S. Gaston, 105 Medical Towers, Little Rock 72205	1990
		Milton D. Deneke, Post Office Box 687, West Memphis 72301	1990

Annual Session Committee

Charles H. Rodgers, 4202 South University, Little Rock 72204	1987
James L. Gardner, 125 Greenwood, Hot Springs 71901	1987
John Crenshaw, 4201 Mulberry, Pine Bluff 71603	1988
Richard O. Martin, Post Office Box 339, Paragould 72450	1988
Ken Lilly, 1120 Lexington, Fort Smith 72901	1988
Glen Baker, 4301 West Markham, Slot 600, Little Rock 72205 - Chairman	1989
Murray T. Harris, P. O. Box 1286, Fayetteville 72702	1989
Wendell Ross, 1120 Lexington, Fort Smith 72901	1989
Ex-Officio Members -	
Mrs. Steven Clift (Anna), 524 Shady Valley Drive, North Little Rock 72116	
Mrs. Juanita Valentine, #26 Heritage Park Circle, North Little Rock 72116	

Committee on Insurance

Danny T. Berry, Post Office Box 788, Lake Village 71653	1988
Peter Irwin, 1500 Dodson, Fort Smith 72901	1988
Rhys A. Williams, Post Office Box 1118, Harrison 72601	1988
Joseph A. Buchman, 500 S. University, Suite 508, Little Rock 72205	1989
John Crenshaw, 4201 Mulberry, Pine Bluff 71603	1990
James L. Gardner, 125 Greenwood, Hot Springs 71901	1990
Eugene F. Still, II, 1500 Dodson, Fort Smith 72901 - Chairman	1990
John C. Jones, 500 S. University, Suite 301, Little Rock 72205	1990

Committee on Medicine and Religion

James O. Pennington, Post Office Box 68, Ola 72853	1988
Fred O. Henker, III, 4301 W. Markham, Slot 506, Little Rock 72201 - Chairman	1988
Walter H. O'Neal, 9601 Interstate 630, Little Rock 72205	1989
C. Randolph Ellis, 1004 South Main,	

Committee on Aging

Joe Norton, 8570 Cantrell, Little Rock 72207 - Chairman	1988
Morton C. Wilson, 1500 Dodson, Fort Smith 72901	1988
Thomas L. Eans, 1709 West Main, Heber Springs 72543	1988
C. Randolph Ellis, 1004 North Main, Malvern 72104	1989
Frank M. Burton, 106 Trivista Right, Hot Springs 71901	1990
Carlos A. Araoz, #1 St. Vincent Circle, Suite 220, Little Rock 72205	1990
Ross E. Fowler, 215 West Stephenson, Harrison 72601	1990
T. E. Townsend, 1420 West 43rd, Pine Bluff 71603	1990
J. Arnold Henry, 3105 West Main Place Russellville 72801	1990

Committee on Mental Health

T. Stuart Harris, 21 Bridgeway Road, North Little Rock 72118	1988
Henry H. Good, #1 St. Vincent Circle, Suite #340, Little Rock 72205	1988
Jerry Blaylock, 901 S. Church, Jonesboro 72401	1988
Aubrey C. Smith, #1 St. Vincent Circle, #260, Little Rock 72205 - Chairman	1989
W. Payton Kolb, 230 Medical Towers Building, Little Rock 72205	1989
William Joe James, Post Office Box 1019, Pine Bluff 71613	1989
Eugene H. Ball, Post Office 1108, Rogers 72757	1989

Committee on AIDS

William N. Jones, 500 S. University, Suite 708, Little Rock 72205 - Chairman	
William L. Mason, 5810 West 10th, Suite 610, Little Rock 72204	
Charles R. Henry, Sr., #4 Armistead Road, Little Rock 72207	
Mr. Paul Harris, 500 S. University, Suite 311, Little Rock 72205	
Tony A. Flippin, #1 St. Vincent Circle, Suite 450, Little Rock 72205	

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All the advantages of cephalexin in a convenient tablet form

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- May enhance patient compliance, particularly among the elderly
- Tablet dosage form may be appreciated by patients of all ages

NEW Keflet Tablets are available as:



Keflet is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-sensitive patients.

Brief Summary. Consult the package literature for prescribing information. **Indications and Usage:** Keflet™ Tablets (cephalexin, Dista) are indicated for the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Respiratory tract infections caused by *Streptococcus pneumoniae* and group A β -hemolytic streptococci (Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. Keflet is generally effective in the eradication of streptococci from the nasopharynx; however, substantial data establishing the efficacy of Keflet in the subsequent prevention of rheumatic fever are not available at present.)

Otitis media due to *S. pneumoniae*, *Haemophilus influenzae*, staphylococci, streptococci, and *Neisseria catarrhalis*

Skin and skin-structure infections caused by staphylococci and/or streptococci

Bone infections caused by staphylococci and/or *Proteus mirabilis*

Genitourinary tract infections, including acute prostatitis, caused by *Escherichia coli*, *P. mirabilis*, and *Klebsiella* sp.

Note—Culture and susceptibility tests should be initiated prior to and during therapy. Renal function studies should be performed when indicated.

Contraindication: Keflet is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: BEFORE CEPHALEXIN THERAPY IS INSTITUTED, CAREFUL INQUIRY SHOULD BE MADE CONCERNING PREVIOUS HYPERSENSITIVITY REACTIONS TO CEPHALOSPORINS AND PENICILLIN. CEPHALOSPORIN C DERIVATIVES SHOULD BE GIVEN CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS.

SERIOUS ACUTE HYPERSENSITIVITY REACTIONS MAY REQUIRE EPINEPHRINE AND OTHER EMERGENCY MEASURES.

There is some clinical and laboratory evidence of partial cross allergenicity of the penicillins and the cephalosporins. Patients have been reported to have had severe reactions (including anaphylaxis) to both drugs.

Any patient who has demonstrated some form of allergy, particularly to drugs, should receive antibiotics cautiously. No exception should be made with regard to Keflet.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins); therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening.

Treatment with broad spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis.

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C. difficile*. Other causes of colitis should be ruled out.

Usage in Pregnancy—Safety of this product for use during pregnancy has not been established.

Precautions: General—Patients should be followed carefully so that any side effects or unusual manifestations of drug idiosyncrasy may be detected. If an allergic reaction to Keflet occurs, the drug should be discontinued and the patient treated with the usual agents (eg, epinephrine or other pressor amines, antihistamines, or corticosteroids).

Prolonged use of Keflet may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug.

Keflet should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

Indicated surgical procedures should be performed in conjunction with antibiotic therapy.

As a result of administration of Keflet, a false positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinistest® tablets but not with Tes Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

Usage in Pregnancy—Pregnancy Category B—The daily oral administration of cephalexin to rats in doses of 250 or 500 mg/kg prior to and during pregnancy, or to rats and mice during the period of organogenesis only, had no adverse effect on fertility, fetal viability, fetal weight, or litter size. Note that the safety of cephalexin during pregnancy in humans has not been established.

Cephalexin showed no enhanced toxicity in weanling and newborn rats as compared with adult animals. Nevertheless, because the studies in humans cannot rule out the possibility of harm, Keflet should be used during pregnancy only if clearly needed.

Nursing Mothers—The excretion of cephalexin in the milk increased up to 4 hours after a 500-mg dose; the drug reached a maximum level of 4 µg/mL, then decreased gradually, and had disappeared 8 hours after administration. Caution should be exercised when Keflet is administered to a nursing woman.

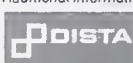
Adverse Reactions: Gastrointestinal—Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely. The most frequent side effect has been diarrhea. It was very rarely severe enough to warrant cessation of therapy. Dyspepsia and abdominal pain have also occurred. As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.

Hypersensitivity—Allergic reactions in the form of rash, urticaria, angioedema, and, rarely, erythema multiforme, Stevens-Johnson Syndrome, or toxic epidermal necrolysis have been observed. These reactions usually subsided upon discontinuation of the drug. Anaphylaxis has also been reported.

Other reactions have included genital and anal pruritus, genital moniliasis, vaginitis and vaginal discharge, dizziness, fatigue, and headache. Eosinophilia, neutropenia, thrombocytopenia, and slight elevations in SGOT and SGPT have been reported.

PV 2211 DFP

Additional information available to the profession on request from



Dista Products Company
Division of Eli Lilly and Company
Indianapolis, Indiana 46285
Mld by Eli Lilly Industries, Inc.
Carolina, Puerto Rico 00630

Harold Hedges, 424 North University,
Little Rock 72205
Glen F. Baker, 4301 West Markham, Slot 600,
Little Rock 72205
Eugene M. Shelby, 100 Whittington,
Hot Springs 71901
Larry D. Ezell, 1907 East Monroe,
El Dorado 71730
Marlon J. Doucet, P. O. Box 66,
Redfield 72132
Don G. Howard, 110 North Clifton,
Fordyce 71742
E. Clinton Texter, Jr., 4301 West Markham, Slot 567,
Little Rock 72205
Linda A. Markland, 241 West Spring,
Fayetteville 72701
A. Stuart Fitzhugh, 4815 West Markham,
Little Rock 72205
James S. Adamson, 890 Medical Towers,
Little Rock 72205
Donald G. Browning, 11212 Rocky Valley,
Little Rock 72212
Mr. Ken LaMastus, P. O. Box 5776,
Little Rock 72215

Committees Appointed by Council

Committee on Position Papers

Carl J. Raque, 500 South University, Suite 704 Little Rock 72205	1988
David Busby, 1809 Garrison, Fort Smith 72902	1988
Allan S. Pirnique, 714 West Faulkner, El Dorado 71730	1988
Jan T. Turley, #2 Halsted Circle, Rogers 72756	1988
Lloyd Langston, Post Office Box 1550, Pine Bluff 71613	1989
Paul Cornell, 500 South University, Little Rock 72205	1989
R. Wendell Ross, 1120 Lexington, Fort Smith 72901	1989
S. Barry Thompson, Jr., 1100 North University, Suite 30, Little Rock 72205	1989
James M. Kolb, Jr., 305 Skyline Drive, Russellville 72801 - Chairman	1990
George W. Warren, Post Office Box W, Smackover 71762	1990
W. Payton Kolb, 230 Medical Towers Building, Little Rock 72205	1990

Budget Committee

**Term Expires
December 31**

Lloyd Langston, Post Office Box 1550, Pine Bluff 71613 - Chairman*	1987
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Frank Morgan, 410 West Pershing Blvd., North Little Rock 72114	1988
L. J. P. Bell, 626 Poplar, Helena 72342	1989
James D. Armstrong, P. O. Box 637, Ashdown 71822	1990
James M. Kolb, Jr., 305 Skyline Drive, Russellville 72801 Permanent Position for Treasurer	
*Chairman is senior member on committee	

Committee on Constitutional Revision

A. S. Koenig, Jr., 2122 South W,
Fort Smith 72901 - **Chairman**
J. Warren Murry, Post Office Drawer A,
Fayetteville 72702
Nathan L. Poff, Post Office Box 1111,
Heber Springs 72543

Ad Hoc Committee on Constitution and By-Laws

Amail Chudy, 1801 Maple Street
North Little Rock 72114
Lloyd Langston, Post Office Box 1550
Pine Bluff 71613
W . P. Phillips, Post Office Box 3507,
Fort Smith 72913

Medical School Committee

James L. Gardner, 125 Greenwood,
Hot Springs 71901 - **Chairman**
Kemal Kutait, 1120 Lexington,
Fort Smith 72901
Boyce W. West, #2 Medicine Drive,
Clarksville 72830
Maxwell G. Cheney, Post Office Box 725,
Mountain Home 72653
R. Jerry Mann, 18 Corporate Hill Drive, Suite 100,
Little Rock 72205

Liaison Committee with State Welfare Department

(Composed of Executive Committee Members)

Ad Hoc Committee to Executive Committee on Liaison with State Departments of Health and Human Services

Larry D. Wright, 1019 West Cypress,
Rogers 72756 - **Chairman**
Milton D. Deneke, Post Office Box 687,
West Memphis 72301
George W. Warren, Post Office Box W,
Smackover 71762
Michael N. Moody, Post Office Box 829,
Salem 72576

Physician-Nurse Joint Practice Committee

James L. Holton, 500 South University, Suite 101
Little Rock 72205
A. Tharp Gillespie, 500 South University, Suite 712
Little Rock 72205
Charles W. Logan, 500 South University,
Little Rock 72205
Kemal Kutait, 1120 Lexington,
Fort Smith 72901
Charles F. Wilkins, 3105 West Main Place,
Russellville 72801 - **Chairman**

Ad Hoc Committee on Journal Advertising

Raymond A. Irwin, Jr., 1220 West 42nd,
Pine Bluff 71603 - **Chairman**
W. Payton Kolb, 230 Medical Towers Building,
Little Rock 72205
Frederick E. Joyce, Post Office Box 2763,
Texarkana, TX 75504

Cost Effectiveness Committee

	Term Expires
Robert B. Clark, 328 Quapaw, Hot Springs 71901	April 1987
John Crenshaw, 4201 Mulberry, Pine Bluff 71603	1988
Kemal Kutait, 1120 Lexington, Fort Smith 72901 - Chairman	1988
Clinton G. Melton, 10th and Highland, Suite J Blytheville 72315	1988

Impaired Physicians Committee

Lee B. Parker, Jr., 241 West Spring,
Fayetteville 72701
Bascom P. Raney, 1415 Metzler Lane,
Jonesboro 72401
J. L. Martindale, 302 West South,
Benton 72015 - **Chairman**
Carl H. Bell, Jr., 1602 West 42nd,
Pine Bluff 71603
Robert L. Ross, 1305 West 43rd,
Pine Bluff 71603
James A. Arnold, 1794 Joyce, Suite 3,
Fayetteville 72703
Gary Harper, 123 Pearl,
Little Rock 72205

Committee on Membership Benefits

John Hestir, P. O. Box 512,
DeWitt 72042 - **Chairman**
Glen Baker, 4301 West Markham, Slot 600,
Little Rock 72205
Hugh F. Burnett, 990 Medical Towers II,
Little Rock 72205

James Floyd Kyser, 900 Medical Towers Building,
Little Rock 72205

F. Hampton Roy, 1000 Medical Towers Building,
Little Rock 72205

Medicaid Drug Formulary Committee

Charles Rodgers, 4202 South University,
Little Rock 72204 - **Chairman**
Donald F. Hill, 416 Skyline Vista,
Russellville 72801
Susan Keathley, 11215 Hermitage Road,
Little Rock 72215
Frank E. Morgan, 410 Pershing,
North Little Rock 72114
J. Clyde Hart, 902 West 44th,
Pine Bluff 71603
E. Clinton Texter, 4301 West Markham, Slot 567,
Little Rock 72205
Harold D. Crall, 780 Medical Towers,
Little Rock 72205

Litigation Advisory Committee

H. W. Thomas, P. O. Box 250,
Dermott 71638
C. Stanley Applegate, Jr., 220 Meadow Avenue,
Springdale 72764
William N. Jones, 500 S. University, Suite 708,
Little Rock 72205
John P. Burge, P. O. Box 788,
Lake Village 71653
Ben Saltzman, 4815 West Markham,
Little Rock 72205
Albert S. Koenig, Jr., 2122 South "W",
Fort Smith 72901
Paul J. Cornell, 500 S. University,
Little Rock 72205
Ken LaMastus, P. O. Box 5776,
Little Rock 72215

COUNCIL APPOINTED BOARDS AND COMMISSIONS

Arkansas Medical Society, Pension Plan Trustees

	Term Expires
Rhys A. Williams, Post Office Box 1118, Harrison 72601 - Chairman	1988
Glen F. Baker, 4301 West Markham, Slot 600, Little Rock 72201	1989
John Hestir, Post Office Box 512, DeWitt 72042	1990

James F. Kyzer, 900 Medical Towers,
Little Rock 72205 1991
James M. Kolb, Jr., 305 Skyline Drive,
Russellville 72801 Treasurer Permanent
PositionEx-officio -
Ken LaMastus, Post Office Box 5776,
Little Rock 72215

Medical Education Foundation for Arkansas
(M.E.F.F.A.)

	Term Expires
	August
W. Martin Eisele, 101 Whittington, Hot Springs 71901 - President	1988
Charles F. Wilkins, Jr., 3105 West Main Place, Russellville 72901	1989
Amail Chudy, 1801 Maple, North Little Rock 72114 - Vice President	1990
Jean Gladden, Post Office Box 1118, Harrison 72601 - Secretary	1991
Ex-Officio (with voting power)	
W. Ray Jouett, #5 St. Vincent Circle, #400, Little Rock 72205 (President)	
John M. Hestir, P. O. Drawer 512, DeWitt 72042 (President-elect)	
Ken Lilly, 1120 Lexington, Fort Smith 72901 (Immediate Past President)	
I. Dodd Wilson, 4301 West Markham, Little Rock 72201 (Dean, UAMS)	

Arkansas State Arbitration Commission
(Society Representatives)

District	Term Expires
	April
1 VACANT	
2 Kenneth R. Meacham, 1300 South Main, Suite 103 Searcy 72143	1991
3 Dennis B. Yelvington, North Beurkle Road, Stuttgart 72160	1991
4 VACANT	
5 James Guthrie, Post Office Box 757, Camden 71701	1989
6 Joe D. King, Post Office Box 549, Nashville 71852	1990
7 VACANT	
8 VACANT	
9 John W. Vinzant, 22 East Spring, Fayetteville 72701	1989
10 James L. Maupin, Post Office Box 1508, Fort Smtih 72902	1990

Arkansas Medical Society Political Action
Committee of Directors

John Crenshaw, 4201 Mulberry,
Pine Bluff 71603 - Chairman 535-2200

Roger E. Cagle, #1 Medical Drive,
Paragould, 72450 - Vice Chairman 239-8504
Mrs. C. Herbert (Ramona)Taylor, Jr., 2238 Washington,
Memphis, TN 38104 - Sec./Treas. 633-6812
Daniel S. Davidson, 1300 South Main,
Searcy 72143 268-3232
W. John Giller, Jr., 705 West Faulkner,
El Dorado 71730 863-6123
James L. Hagler, 500 South University,
Little Rock 72205 664-5330
W. Payton Kolb, 230 Medical Tower Building,
Little Rock 72205 225-0887
James H. Landers, 500 South University, Suite 519,
Little Rock 72205 664-1104
Robert H. Langston, 520 North Spring,
Harrison 72601 741-8286
Ken E. Lilly, 1120 Lexington,
Fort Smith 72901 785-2655
Richard O. Martin, Post Office Box 339,
Paragould 72450 239-7194
Paul D. Meredith, 1901 Beech,
Texarkana, AR 75502 773-5423
Robert D. Miller, Jr., 616 Elm,
Helena 72342 338-8531
Hoy B. Speer, Jr., 1708 North Buerkle,
Stuttgart 72160 673-2586
Joe H. Stallings, Jr., 404 Creath,
Jonesboro 72401 932-8121
Mrs. Kemal (Virginia) (J.) Kutait, 3724 Free Ferry Road,
Fort Smith 72903 783-0847
Mrs. Deno (Gwen) P. Pappas, 125 Trivista,
Hot Springs 71901 624-0775
Mrs. Stephen (Sharon) R. Rauls, 1127 West Main,
Blytheville 72315 763-7386

Arkansas Medical Society Legislative Fund

James R. Weber, Post Office Box 188,
Jacksonville 72076 - Chairman
Asa A. Crow, #1 Medical Drive,
Paragould 72450
W. Payton Kolb, 230 Medical Towers Building,
Little Rock 72205
Ex-Officio Member:
W. Ray Jouett, #5 St. Vincent Circle, #401,
Little Rock 72205

COUNCIL AD HOC COMMITTEES

Informed Consent Committee

J. Larry Lawson, #1 Medical Drive,
Paragould 72450 - Chairman
James R. Weber, Post Office Box 188,
Jacksonville 72076
W. P. Phillips, Post Office Box 3507,
Fort Smith 72913

Bill [unclear], 9500 Lile Drive, Suite 700,
 Little Rock 72205
 [unclear] DesLauriers, 270 Medical Towers Building,
 Little Rock 72205
 Robert H. Janes, 1500 Dodson,
 Fort Smith 72901
Resident Physician Committee
 Warren Boop, 4301 West Markham, Slot 507
 Little Rock 72201 - **CHAIRMAN**
 Amail Chudy, 1801 Maple,
 North Little Rock 72114
 James Cornett, 3005 Rodney Parham, Suite 14,
 Little Rock 72205

COMMITTEES ELECTED BY THE HOUSE OF DELEGATES

Nominating Committee		Term Expires
Councilor District		April
1	Richard O. Martin, P. O. Box 339, Paragould 72450	1989

2	Michael Moody, P. O. Box 829, Salem 72576	1988
3	Robert D. Miller, 616 Elm, Helena 72342	1989
4	John Crenshaw, 4201 Muberry, Pine Bluff 71603	1988
5	Raymond N. Bowman, 619 North Newton, El Dorado 71730	1989
6	James D. Armstrong, P. O. Box 637, Ashdown 71822	1988
7	Brenda N. Powell, 3100 Malvern, #401, Hot Springs 71901	1989
8	*Charles W. Logan, 500 South University, Little Rock 72205	1988
9	Robert H. Langston, 520 North Spring, Harrison 72601	1989
10	Morton C. Wilson, 1500 Dodson, Fort Smith 72901	1988

*Chairman

MEDICAL SERVICES REVIEW COMMITTEE

Term Expires	Committee Member	Specialty			
April 30	(Name and Address)	Represented			
1990	Leslie F. Anderson, 1310 North Center, Lonoke 72086	Fam. Pr.	1988	N. Little Rock 72114	Ob-Gyn
1988	R. Wendell Ross, 1120 Lexington, Fort Smith 72901	Fam. Pr.	1988	W. Ray Jouett, 5 St. Vincent Circle, #401, Little Rock 72205	Neurosurgery
1988	J. Richard Gardial, 125 Greenwood, Hot Springs 71901	Fam. Pr.	1990	Henry H. Good, #1 St. Vincent Circle, #340, Little Rock 72205	Psychiatry
1990	Robert S. Gaston, 105 Medical Towers, Little Rock 72205	Int. Med.	1989	Susan A. Keathley, 11215 Hermitage Road, Little Rock 72215	Pediatrics
1988	John Schultz, 10001 Lile Drive, Little Rock 72205	Int. Med.	1990	H. Howard Cockrill, Jr., 500 S. University, Little Rock 72205	Radiology
1990	Paul M. Anderson, 1501 So. Waldron, Suite 201, Fort Smith 72903	Surgery	1990	Mae B. Nettleship, P. O. Box 817, Fayetteville 72702	Pathology
1989	H. Scott McMahan, Post Office Box 647, Magnolia 71753	Surgery	1988	Stuart B. McConkie, 200 Whittington, #211, Hot Springs 71901	Orthopedics
1988	Hugh F. Burnett, 990 Medical Towers Building, Little Rock 72205	Surgery	1988	Morton C. Wilson, 1500 Dodson, Fort Smith 72901	Urology
1989	Edwin Whiteside, 3416 Old Greenwood Road, Fort Smith 72903	Allergy	-	Charles H. Rodgers, 4202 South University, Little Rock 72204	(Chairman)
1988	Robert D. Fisher, 1500 Dodson, Fort Smith 72901	Anes.	-	John Crenshaw, 4201 Mulberry, Pine Bluff 71603	(Vice Chairman)
1989	William W. Galloway, 1602 West Main Place, Russellville 72801	Derm.	-	W. Ray Jouett, 5 St. Vincent Circle, Suite #401, Little Rock 72205	(President)
1989	Tom Smith, 300 Medical Towers Building, Little Rock 72205	Oto.	-	John Hestir, P. O. Drawer 512, DeWitt 72042	(President-elect)
1989	Jimmie J. Magie, 24 Main Street, Conway 72032	Oph.	-	James R. Weber, P. O. Box 188, Jacksonville 72076	(Secretary)
1990	Stephen R. Marks, 2001 W. Pershing, #2A,		-	J. Larry Lawson, #1 Medical Drive, Paragould 72450	(Council Chairman)
			-	Ken Lilly, 1120 Lexington, Fort Smith 72901	(Immediate Past President)

Sub-Committee of Sub-Specialties

(Representatives on call to meet with Committee as needed when claims in specialty field are considered)

Term

Expires April 30 **Sub-Committee Representative (Name and Address)** **Sub-Specialty Represented**

Carl L. Williams, 522 South 16th,
Fort Smith 72901 Thoracic Surgery
Thomas J. Smith, 409 North University
Little Rock 72205 Gastroenterology
Robert G. Vogel, 11219 Hermitage, #200
Little Rock 72211 Plastic Surgery

John C. Schultz, 10001 Lile Drive
Little Rock 72205 Pulmonary Disease
Kelsy J. Caplinger, III, 11215 Hermitage, #104
Little Rock 72215 Pediatric Allergy
G. Doyne Williams, #5 St. Vincent Circle, #201
Little Rock 72205 Cardiovascular Surg.
Robert F. McCrary, Jr., 3100 Malvern #102
Hot Springs 71901 Nephrology
Robbie R. Atkinson, D.D.S., 1801 West 40th, 2-A
Pine Bluff 71601 Oral Surgery
Eugene M. Shelby, 100 Whittington
Hot Springs 71901 Emergency Medicine
(Created 1987)

SPECIALTY SECTION OFFICERS

Arkansas Chapter, American College of Surgeons

Pres. -- Samuel E. Landrum, 2901 South 74th,
Fort Smith, Arkansas 72903

VPres. -- John P. Burge, Post Office Box 788,
Lake Village 71653

Secy. -- Virgil Lyons, 500 South University,
Suite 421, Little Rock 72205

Arkansas Orthopaedic Society

Pres. -- S. Berry Thompson, 1100 North University,
Suite 30, Little Rock 72207

Secy. -- Don Vowell, 224 West Erie,
Harrison 72601

Arkansas Society of Internal Medicine

Pres. -- William E. Golden, 4301 West Markham, Slot
641, Little Rock 72205

Secy. -- Robert Lavender, #6 Summerhill Court,
Little Rock 72212

Arkansas Hand Club

Pres. -- Dr. Cole Goodman, 1500 Dodson,
Fort Smith 72901

Secy. -- Marcia Hixson, 4301 West Markham, Slot 531,
Little Rock 72205

Arkansas Academy of Family Physicians

Pres. -- Harold Hedges, 424 North University Avenue,
Little Rock 72205

Secy. -- Stephen Tucker, 424 North University Avenue,
Little Rock 72205

Ex. VPres. -- Ms. Carla Mayfield, 7509 Cantrell,
Suite 236, Little Rock 72207

Arkansas Society of Plastic and Reconstructive Surgeons

Pres. -- Eugene F. Still, 2901 South 74th Street,
Fort Smith 72901

VPres. -- Robert Vogel, 11219 Hermitage, Suite 200,
Little Rock 72211

Secy. -- James S. Beckman, Jr., 1794 Joyce, Suite 1,
Fayetteville 72703

Arkansas Ophthalmological Society

Pres. -- James H. Landers, 500 South University, Suite
519, Little Rock 72205

Secy. -- John Williamson, 318 Thompson,
El Dorado 71730

Arkansas Academy of Ophthalmology

(Educational Programs)

Secy.-- Carol Chappell, #5 St. Vincent Circle, #400,
Little Rock 72205

Arkansas Chapter, American Otolaryngology Society

Pres. -- Clarence Gossett, 505 East Matthews,
Jonesboro 72401

Secy. -- Stephen D. Shorts, Post Office Box 1550,
Pine Bluff 72601

Arkansas Chapter, American College of Obstetricians and Gynecologists

Chairman -- Mose Smith, III, 5326 West Markham,
Little Rock 72205

VChairman -- Robert Young, 500 South University, Suite
818, Little Rock 72205

Arkansas Urologic Society

Pres. -- Jan Turley, #2 Halsted Circle,
Rogers 72764

Secy. -- Ladd Scriber, 303 East Matthews,
Jonesboro 72401

Arkansas Chapter, American College of Radiology

Pres. -- Howard Cockrill, Jr., 500 South University,
Little Rock 72205

Secy. -- William C. Glover, 1100 Medical Tower
Building, Little Rock 72205

Arkansas Society of Pathology

Pres. -- John E. Slaven, 1120 Medical Towers,
Little Rock 72205

Secy. -- Robert A. Burger, #8 Wingate Drive,
Little Rock 72205
Arkansas Chapter, American Academy of Pediatrics
Chairman -- Gilbert Buchanan, 500 South University,
#200, Little Rock 72205
VChairman -- Dr. Doane Newton, 236 Woodbine,
Hot Springs 71901
Secy. -- Fred Kittler, Post Office Box 5675,
Little Rock 72215
Arkansas Psychiatric Society
Pres. -- R. Bronson Stillwell, P. O. Box 357,
Fayetteville 72701
Secy. -- Warren Douglas, #260 Medical Towers
Building, Little Rock 72205
Arkansas Dermatologic Society
Pres. -- Don Lum, 4301 Mulberry,
Pine Bluff 71601
Secy. -- Burton A. Moore, 500 South University, Suite
501, Little Rock 72205
Arkansas Society of Anesthesiologists
Pres. -- F. Allen White, 500 S. University, Suite 505,
Little Rock 72205
VPres. -- Fred Spies, 1150 Crestwood,
Fayetteville 72701

Secy. -- Margaret Dildy Beasley, 4301 West Markham,
Slot 515, Little Rock 72205
Alan Cazort Allergy Society of Arkansas
Pres. -- Kelsy J. Caplinger, 11215 Hermitage Road,
Suite 104, Little Rock 72215
Secy. -- Russell Steele, 800 Marshall Street,
Little Rock 72203
Arkansas Chapter, American College of Physicians
Pres. -- George Ackerman, 4301 West Markham, Slot
640, Little Rock 72205
Secy. -- Robert Bradsher, 4301 West Markham,
Little Rock 72205
Arkansas Chapter, American College of Cardiology
Governor -- James J. Kane, Jr., #5 St. Vincent Circle,
Little Rock 72205
**Arkansas Chapter, American College of Emergency
Physicians**
Pres. -- Eugene Shelby, P. O. Box 55067,
Little Rock 72225
VPres. -- Fred Svendsen, Route 1, Box 290,
Mayflower 72106
Secy. -- Robert E. Harrell, 24 River Ridge Road,
Little Rock 72202

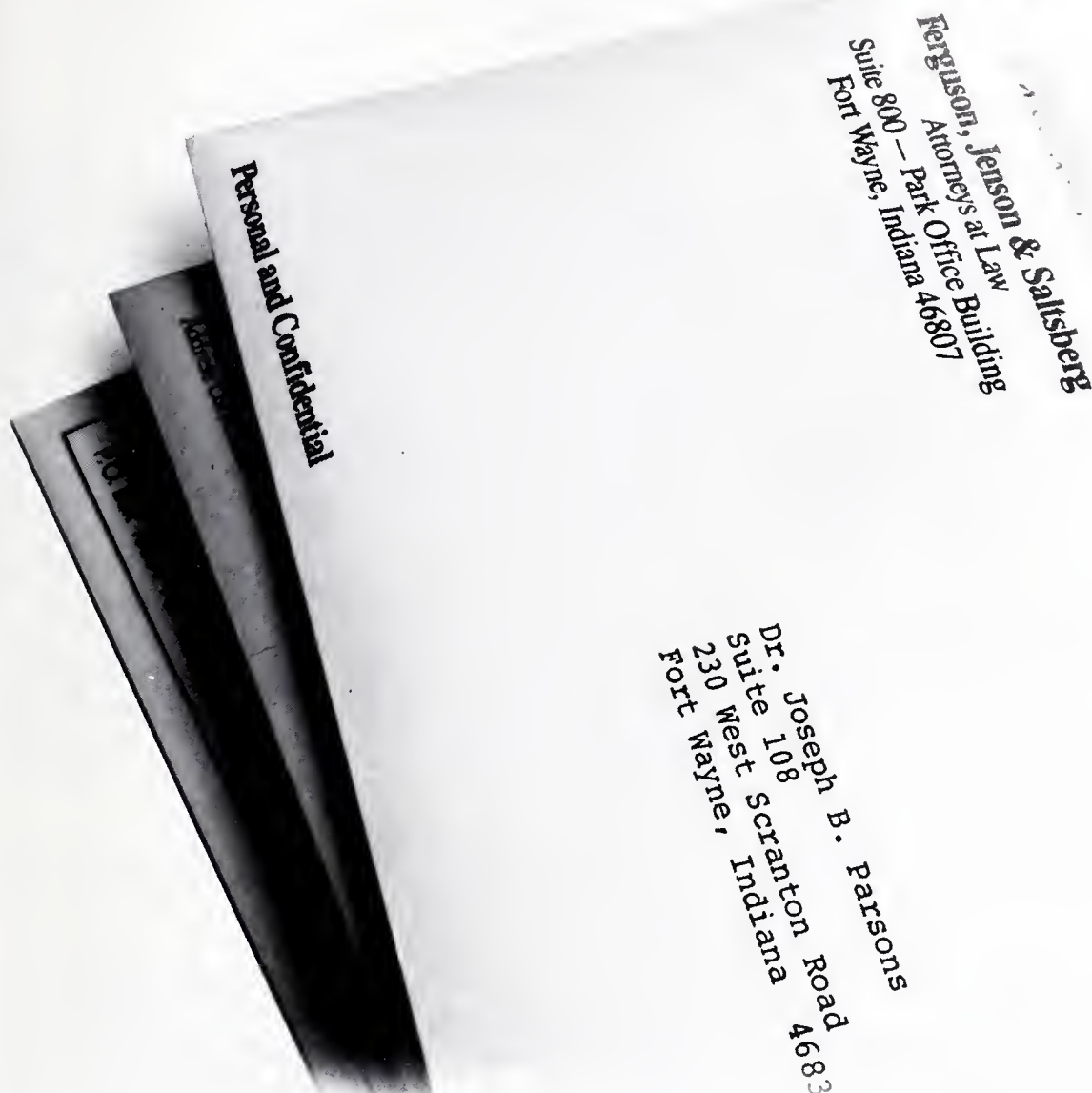
1987 COUNTY MEDICAL SOCIETY OFFICERS

Arkansas	Pres.--
	Secy.-- Dennis Yelvington, North Buerkle Road, Stuttgart 72160
Ashley	Pres.-- C. E. Hicks, P. O. Box 232, Hamburg 71646
	Secy.-- Ben Walsh, P. O. Box 904, Crossett 71635
Baxter	Pres.-- Joe Tullis, P. O. Box 1137, Mountain Home 72653
	Secy.-- Arthur L. Beard, 126 West Sixth, Mountain Home 72653
	Asst.Secy.-- Julia Short, 126 West Sixth, Mountain Home 72653
Benton	Pres.-- Robert W. Donnell, 1040 West Walnut, Rogers 72765
	Secy.-- Jerry Hitt, 1040 West Walnut, Rogers 72757
Boone	Pres.-- Charlton L. Chambers, III, Bower at Pine, Harrison 72601
	Secy.-- Sue Chambers, Bower at Pine Streets, Harrison 72601
Bradley	Pres.-- William C. Whaley, 205 East Church, Warren 71671
	Secy.-- George F. Wynne, 113 West Cypress, Warren 71671
Carroll	Pres.-- Greg Kresse, 41 Kingshighway, Eureka Springs 72632
	Secy.-- Richard Taylor, 207 Carter, Berryville 72616
Chicot	Pres.--
	Secy.-- Tom Tvedten, P. O. Box 512A, Lake Village 71653
Clark	Pres.-- Robert Dorman, 2850 Twin Rivers Drive, Arkadelphia 71923
	Secy.-- Wesley Kluck, 2850 Twin Rivers Drive, Arkadelphia 71923
Cleburne	Pres.-- Thomas Eans, 1709 West Main, Heber Springs 72543
	Secy.--
Columbia	Pres.-- Rodney L. Griffin, 123 North Jackson, Magnolia 71753
	Secy.-- Robert W. Hunter, 2602 Crestview, Magnolia 71753
Conway	Pres.-- Thomas Buchanan, 200 South Moose, Morrilton 72110
	Secy.-- Peter Post, 10 Hospital Drive, Morrilton 72110

Craighead-Poinsett	Pres.-- Ladd J. Scriber, 303 East Matthews, Jonesboro 72401 Secy.-- Douglas Maglothin, 820 South Church, Jonesboro 72401
Crawford	Pres.--
Crittenden	Secy.-- Charles Jennings, 2020 Chestnut, Suite 108, Van Buren 72956 Pres.-- Trent Pierce, 228 Tyler, Suite 304, West Memphis 72301
Cross	Secy.-- Kenneth R. Nadeau, 228 Tyler, West Memphis 72301 Pres.-- James R. Jacobs, P. O. Box E, Wynne 72396
Dallas	Secy.-- Vance J. Crain, P. O. Box 158, Wynne 72396 Pres.-- Hugh A. Nutt, 110 North Clifton, Fordyce 71742
Desha	Secy.-- Mark Floyd, 300 North Clifton, Fordyce 71742 Pres.-- Guy U. Robinson, 207 South Elm, Dumas 71639
Drew	Secy.-- Howard R. Harris, 207 South Elm, Dumas 71639 Pres.--
Faulkner	Secy.-- Paul Wallick, 906 Roberts Drive, Monticello 71655 Asst.Secy.-- Sue Smith, 778 Scroggins Drive, Monticello 71655
Franklin	Pres.--
Garland	Secy.-- Bob G. Banister, 923 Parkway, Conway 72032 Pres.--
Grant	Secy.-- David Gibbons, P. O. Box 136, Ozark 72949 Pres.-- Phillip Smith, 911 West Grand, Hot Springs 71913
Greene-Clay	Secy.-- Philip Woodward, 903 West Grand, Hot Springs 71913 Asst.Secy.-- Mary Payne, 911 West Grand, Hot Springs 71913
Hempstead	Pres.-- Jack M. Irvin, 205 West High, Sheridan 72150 Secy.-- Clyde D. Paulk, P. O. Box 307, Sheridan 72150
Hot Spring	Pres.-- Dwight Williams, #1 Medical Drive, Paragould 72450 Secy.-- George Collier, #5 Market Place, Paragould 72450
Howard-Pike	Pres.--
Independence	Secy.-- Leland Dodd, P. O. Box 1118, Hope 71801 Pres.-- Ken Murphy, 1002 Schneider Drive, Malvern 72104
Jackson	Secy.-- Greg Loyd, 1002 Schneider Drive, Malvern 72104 Asst.Secy.-- Ray Bollen, 1002 Schneider Drive, Malvern 72104
Jefferson	Pres.-- Joe D. King, P. O. Box 549, Nashville 71852 Secy.-- Samuel W. Peebles, 120 West Sybert, Nashville 71852
Johnson	Pres.-- Charles Akin, 407 Virginia Drive, Batesville 72501 Secy.-- Robert Baker, 41 Big Pine Road, Batesville 72501
Lafayette	Pres.-- Jabez F. Jackson, Jr., 1205 McLain Street, Newport Secy.-- Mufiz A. Chauhan, P. O. Box 1070, Newport 72112
Lawrence	Pres.-- Malcolm Pearce, 1612 West 42nd, Pine Bluff 71603 Secy.-- Simmie Armstrong, 1716 Doctors Drive, Pine Bluff 71603
Lee	Asst.Secy.-- Maggi Wadsworth, 1515 West 42nd, Pine Bluff 71603 Pres.--
Little River	Secy.-- Robert Frazier, P. O. Box 668, Clarksville 72830 Pres.--
Logan	Secy.-- Craig E. Ditsch, P. O. Box 276, Stamps 71860 Pres.-- Robert D. Quevillon, 421 Southwest Third, Walnut Ridge 72476
Lonoke	Secy.-- Ralph Joseph, P. O. Box 109, Walnut Ridge 72476 Pres.-- E. C. Fields, 77 West Main, Marianna 72360
Miller	Secy.-- Dwight W. Gray, 110 West Chestnut, Marianna 72360 Pres.-- James D. Armstrong, P. O. Box 637, Ashdown 71822
	Secy.-- Joe G. Shelton, Jr., 2nd and Main Streets, Ashdown 71822 Pres.-- Sanford E. Hutson, III, P. O. Box 188, Paris 72855
	Secy.-- Doug Buckley, P. O. Box 625, Paris 72855 Pres.-- Joe Abrams, P. O. Box 993, Cabot 72023
	Secy.-- B. E. Holmes, 305 West Front, Lonoke 72086 Pres.-- Herbert Wren, P. O. Box 1409, Texarkana 75504
	Secy.-- James Burroughs, 300 East Sixth, Texarkana 75502

Mississippi	Asst.Secy.-- Arlene Rushan, 1406 College Drive, Suite #1, Texarkana 75504 Pres.-- Jerry Biggerstaff, 608 West Lee, Osceola 72370 Secy.-- Eldon Fairley, P. O. Box 448, Osceola 72370
Monroe	Pres.-- N. C. David, Jr., 108 West Ash, Brinkley 72021 Secy.-- W. L. Walker, 114 South New Orleans, Brinkley 72021
Nevada	Pres.-- C. E. Corbell, 301 Hale Avenue, Prescott 71857 Secy.-- Michael C. Young, 301 Hale Avenue, Prescott 71857
Ouachita	Pres.-- Lawrence F. Braden, 415 Hospital Drive, Camden 71701 Secy.-- Jerry R. Kendall, 353 Cash Road, Camden 71701
Phillips	Pres.-- Gordon E. McCarty, 107 Hickory Hill, Helena 72342 Secy.-- Maurice Elovitz, P. O. Box 808, Helena 72342
Polk	Pres.-- Helen McClard, P. O. Box 655, Mt. Ida 71957 Secy.-- David D. Fried, Rt 3, Box 194, Mena 71953
Pope	Pres.-- William W. Galloway, 1602 West Main, Russellville 72801 Secy.-- James Mark Myers, 3105 West Main Place, Russellville 72801
Pulaski	Asst.Secy.-- Mary Jo Whittenburg, 3105 West Main Place, Russellville 72801 Pres.-- David L. Barclay, 500 S. University, Suite 614, Little Rock 72205 Secy.-- Carlos Araoz, #1 St. Vincent Circle, #220, Little Rock 72205
Randolph	Asst.Secy.-- Paul Harris, 500 S. University, Suite 311, Little Rock 72205 Pres.-- John Hann, P. O. Box 344, Imboden 72434 Secy.-- Danny B. Holt, Rt. 5, Doctors Medical Bldg., Pocahontas 72455
Saline	Pres.-- Greg Johnston, 205 West Carpenter, Benton 72015 Secy.-- Sam Taggart, P. O. Box 969, Benton 72015
Sebastian	Asst.Secy.-- Cindy Sorrells, Saline Mem. Hosp., Benton 72015 Pres.-- Stanley McEwen, 3000 Rogers Avenue, Fort Smith 72901 Secy.-- Gene Girkin, 923 Lexington Avenue, Fort Smith 72901
Sevier	Asst.Secy.-- Gail Fellingner, 2409 South "M" Street, Fort Smith 72901 Pres.-- Secy.-- Jim Pearce, Highway 70 West, DeQueen 71832
St. Francis	Pres.-- E. Morgan Collins, 1801 Lindauer Road, Forrest City 72335 Secy.--
Tri-County	Pres.-- Lewis G. Allen, Star Route 38A, Ash Flat 72513 Secy.-- Carl B. Arnold, P. O. Box 457, Salem 72576
Union	Pres.-- H. Aubry Talley, 403 West Oak, El Dorado 71730 Secy.-- Wayne G. Elliott, 443 West Oak, El Dorado 71730
Van Buren	Asst.Secy.-- Mary Frances Fumas, 700 West Grove, El Dorado 71730 Pres.-- Charles G. Pearce, P. O. Box 51, Clinton 72031
Washington	Secy.-- John A. Hall, Box 310, Clinton 72031 Pres.-- John Kendrick, P. O. Box 1519, Springdale 72765
White	Secy.-- David Rogers, 767 West North, Fayetteville 72701 Pres.-- Larry Weathers, 1300 South Main, Searcy 72143
Woodruff	Secy.-- John Bell, 1300 South Main, Searcy 72143 Pres.--
Yell	Secy.-- James E. Rowe, P. O. Box 387, McCrory 72101 Pres.-- James O. Pennington, P. O. Box 68, Ola 72853 Secy.-- Damon G. H. Martin, P. O. Box 328, Ola 72853

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resources of the home office Law Department to draw from, they're always ready to answer your questions or give advice.

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IN 102

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

John Bangert

Suite 310, 10 Corporate Hill Drive, Little Rock, AR 72205, (501) 221-1056

FROM OTHER YEARS

Journal of the Arkansas Medical Society
Vol. 28, No. 11 April 1932 P. 218

The Chief Functions of the Auxiliary

SOCIAL, to promote good fellowship, aid in entertainments at medical meetings, and increase attendance at such meetings.

PHILANTHROPIC, to give community service wherever such service is needed, particularly service related to the work of the medical profession.

LEGISLATIVE, education in medical and health laws and participation in such legislation as is requested or approved by the Medical Society to which we are auxiliary.

EDUCATIONAL, to aid the medical profession in its Health Education work through organizations to which we belong

(a) by becoming informed ourselves.

(b) by accepting positions of leadership in such organizations, particularly on health committees, so that authentic literature may be chosen for programs and for distribution, and that informed speakers may be selected.

(c) by promoting the distribution of *Hygeia*, the health magazine published by the American Medical Association.

--Mrs. Arthur McGlothian, St. Joseph, Mo., President Woman's Auxiliary to the American Medical Association.

The Monthly Bulletin of the Arkansas Medical Society
1(No.4): 10-11, 15 September 1904

City Physician's Report

The report of City Physician Anderson Watkins of Little Rock for the month of August shows that there were fifty-nine deaths in the city during the month, a percentage of 1.04 per thousand of population. Of the number forty were white, of which fifteen were male adults, twelve female adults, none male children and four female children. Of the nineteen negroes who died, three were male adults, four female adults, six male children and six female children. Twelve cases of contagious diseases were reported.

Fifty-six births were reported during the month, of which thirty-two were white and twenty-four negroes.

The report of the city hospital for August showed only two deaths, the smallest number reported in one month for some time. The two patients who died were Mrs. L. A. Pierce of Bearden and William Morris of Little Rock. the total number of patients in the hospital was 826. The total expense was \$543.40 and the average cost per patient per day was 74 cents.

From the University of Arkansas for Medical Sciences Library, History of Medicine/Archives Division.

The *Cumulative Index to the Journal of the Arkansas Medical Society 1890-1986*, prepared as a sesquicentennial project of the History of Medicine Associates, is available for purchase. The 214-page, paperbound index includes subject and author listings. It is available for \$10.00 plus \$1.00 postage and handling, *prepaid*. Send your pre-paid order to: History of Medicine Associates, UAMS Library, Slot 586, 4301 West Markham, Little Rock, AR 72205.

KEEPING UP

ACE Inhibitors

August 10, 7:00 p.m. Presented by Gary Echnoyan, M.D., Baylor School of Medicine. Sponsored by AHEC-Southwest. Sheriton Inn of Texarkana, I-30 and State Line, Texarkana, TX. One Category I credit hour.

Breathing

August 18, 7:00 p.m. Presented by Thomas Preston Kennedy, M.D., Division of Pulmonary Medicine, University of Tennessee, Memphis. Sponsored by the Baxter County Regional Hospital, Mountain Home.

Education Building, Baxter County Regional Hospital. Two Category I credit hours.

Regional Perinatal Conference

August 20, 6:00 p.m.-8:30 p.m. and August 21, 8:00 a.m.-3:45 p.m. Presented by Frank C. Miller, M.D. Sponsored by the UAMS Office of Continuing Education for Physicians. Stroud Hall, St. Bernard's Regional Medical Center, Jonesboro. Six and three-quarters Category I credit hours. Fee: \$25.

Estrogen Replacement

August 25, 1987, 12:00 noon. Presented by Gilbert Haas, M.D. Sponsored by AHEC - Fort Smith. Sparks Regional Medical Center, Seventh Floor Dining Room. One Category I credit hours.

Nutrition and Aging III: Malnutrition in the Elderly

September 9-10, 8:00 a.m. - 4:00 p.m. and 8:00 a.m. - 3:00 p.m. Presented by David A. Lipschitz, M.D., Ph.D. and Ronni Chernoff, Ph.D., R.D. Sponsored by UAMS Office of Continuing Education for Physicians. Excelsior Hotel, Little Rock. Fee: \$175.00; VA employees, \$50.00. Eleven Category I credit hours.

ATLS Provider Course

September 12-13, time to be announced. Presented by Robert W. Barnes, M.D., and Charles D. Mabry, M.D. Sponsored by UAMS. Education Building, Little Rock. Sixteen hours Category I credit. Fee: \$425.00.

Diabetic Seminar

September 12. Sponsored by Baptist Medical Center. BMC Shuffield Auditorium. For further information contact: BMC Medical Education Department, (501) 227-2672.

Why Do I Keep Hurting Myself: Adolescent Alcoholism & Substance Abuse

September 15, 7:00 p.m. Presented by Vann Arthur Smith, PhD., C.A.C., Clinical Neuropsychologist, Libertyville, IL. Sponsored by Baxter County Regional Hospital, Mountain Home. Education Building, Baxter County Regional Hospital. Two hours Category I credit.

Gerontology

September 22 and 24, 12:30 p.m. Presented by Herbert T. Smith, M.D. Sponsored by AHEC - Fort Smith. Sparks Regional Medical Center. One hour Category I credit.

Osteoporosis

September 23, 12:30 p.m. Sponsored by AHEC-Fort Smith. Sparks Regional Medical Center. One hour Category I credit.

Treatment of Acute Chemical Exposure

September 26. Presented by George Wood, M.D. Sponsored by Baptist Medical Center. BMC Shuffield Auditorium. For further information contact: BMC's Medical Education Department, (501) 227-2672.

Recurring Education Programs

EL DORADO - AHEC

Behavioral Sciences Conference, first and fourth Friday, 12:15 p.m., AHEC - South Arkansas.
Chest Conference, third Wednesday, 12:30 p.m., Warner Brown Hospital
Fracture Conference, third Tuesday, 12:15 p.m., AHEC-South Arkansas
Gynecology-Pathology Conference, second Friday, 12:15 p.m., AHEC-South Arkansas
Internal Medicine Conference, first, second and fourth Wednesday, 12:15 p.m., AHEC-South Arkansas
Pathology Conference, second Tuesday, 12:15 p.m., AHEC-South Arkansas
Pharmacology Conference, second Thursday, 12:15 p.m., AHEC-South Arkansas
Obstetrics-Gynecology Conference, fourth Thursday, 12:15 p.m., AHEC-South Arkansas
Surgical Conference, first, second and third Monday, 12:15 p.m., AHEC-South Arkansas
Tumor Clinic, fourth Tuesday, 12:15 p.m., AHEC-South Arkansas

FAYETTEVILLE - AHEC NORTHWEST

Medicine Teaching Conference, first, third and fifth Friday, 7:30 a.m., Baker Conference Room, Washington Regional Medical Center

FAYETTEVILLE - VA MEDICAL CENTER

Medical Conferences (varying topics), each Wednesday, 12:15 p.m., Conference Room, Building 1, VAMC
Pathology/Mortality Conference, each Friday, 12:30 p.m., Surgical Suite, VAMC

FORT SMITH-AHEC

Cardiology, first Wednesday, 12:00 p.m., Sparks Regional Medical Center
Dermatology Conference, first Thursday, 12:00 p.m., Sparks Regional Medical Center
Family Practice Conference, third Wednesday, 12:00 p.m., Sparks Regional Medical Center
Neurology Conference, second Thursday, 12:00 p.m., Sparks Regional Medical Center

HOT SPRINGS-AMI NATIONAL PARK MEDICAL CENTER

Continuing Medical Education Luncheon, varying topics, second and fourth Friday, 12:30 p.m., Classrooms, AMI National Park Medical Center

JOHNS HOPKINS AHEC NORTHEAST

Lecture Series, first and third Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Annex Building
Methodist Hospital CME Conference, last Friday, 7:00 a.m., Arkansas Methodist Hospital, Paragould
Conference, fourth Thursday, 12:00 noon, St. Bernard's Dietary Conference Room
Independence County Medical Society, second Tuesday, 7:30 p.m., White River Medical Center, Batesville
Interesting Case Conference, second and fifth Tuesday, when applicable, 12:00 noon, St. Bernard's Dietary Conference Room
Kennett Tumor Conference, second Tuesday (every other month), Twin Rivers Regional Medical Center, Kennett, Mo.
Methodist Hospital of Jonesboro CME Staff Conference, second Tuesday, 7:30 p.m., Cafeteria, Methodist Hospital of Jonesboro
Monthly Medical Lecture Series, third Tuesday, 7:30 p.m., rotates each month between Walnut Ridge and Pocahontas
Newport Tumor Conference, second Wednesday, 12:00 noon, rotates each month between Harris Clinic and Newport Hospital
Perinatal Conference, second Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Poplar Bluff Tumor Conference, third Wednesday, 12:00 noon, Lucy Lee Hospital, Poplar Bluff.
Tumor Conference, fourth Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Alternating Sub-Specialty Conference, third Wednesday, 12:00 noon, Second Floor Classroom
General Pediatrics Seminar, first and third Friday, 12:00 noon, Second Floor Classroom
Genetics Conference, each Wednesday, 12:00 noon, Sturgis Building, Room 457
Infectious Disease Conference, second Wednesday, 12:00 noon, Sturgis Building, Room 121
Oncology Conference, third Thursday, 8:00 a.m., Second Floor Classroom
Pediatric Grand Rounds, each Tuesday, 8:00 a.m., Sturgis Building, Auditorium
Pediatric Neuropsychiatry Conference, second Wednesday, 1:30 p.m., Polly R. Thomas Conference Room
Pediatric Neuroscience Conference, first Thursday, 8:00 a.m., Second Floor Classroom
Pediatric Pathology Conference, first Wednesday, 12:00 noon, Second Floor Classroom
Pediatric Pharmacology Conference, fifth Wednesday when applicable, 12:00 noon, Second Floor Classroom
Pediatric Radiology Conference, first and third Thursday, 12:00 noon, Second Floor Classroom
Pediatric Research Conference, third Monday, 12:00 noon, Second Floor Classroom
Problem Case Conference, second and fourth Friday, 12:00 noon, Second Floor Classroom
Respiratory Care Case Conference, each Monday, 3:00 p.m., Second Floor Classroom

LITTLE ROCK-ST. VINCENT INFIRMARY

Cancer Conference, first Wednesday, 12:00 noon, CARTI Auditorium. A meal is provided.
Cancer Conference, third and fourth Thursday, 12:00 noon, Room S1174K, Lab. A meal is provided.
General Medicine Journal Club, each Tuesday, 12:00 noon, Medical Affairs Conference Room. Bring your lunch.
Hematology-Oncology Conference, second Thursday, 12:00 noon, Laboratory Library. A meal is provided.
Interhospital Urology Grand Rounds, first Tuesday, 5:30 p.m., Classroom 1, Education Wing. Refreshments are provided.
Pediatric Conference, first Tuesday, 12:30 p.m., Classroom I, Education Wing. A meal is provided.
Peripheral Vascular Disease Conference, third Tuesday, 6:00 p.m., Classroom 1, Education Wing. A meal is provided.
Pulmonary Conference, second and fourth Wednesday, 12:00 noon, Classroom 1, Education Wing. A meal is provided.
Neuropathology Conference, third Tuesday, 5:00 p.m., Room S1174K, Laboratory. Refreshments are provided.

LITTLE ROCK-UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

ACRC/CARTI Tumor Conference, each Wednesday, 12:00 noon, CARTI, Markham & University
ACRC Oncology Forum, fourth Thursday, 4:00 p.m., UAMS Education Building, Room G137
Anesthesia Lecture Series, each Wednesday and Thursday, 4:00 p.m., UAMS Education Building, Room G/110 A & B
Anesthesia Morbidity and Mortality Conference, each Tuesday, 6:45 a.m. (Wednesday afternoon only during last week of the month at 4:00 p.m.), UAMS Education Building, Room G/110 A&B
Interdisciplinary Gynecologic Cancer Conference, each Friday, 12:30 p.m., UAMS Education Building, Room G106 A&B
Medicine Grand Rounds, each Thursday, 12:15 p.m., UAMS Shorey Auditorium.
Medicine Research Conference, each Tuesday, 8:00 a.m., UAMS Shorey Building Room 8/105
Neurology Clinical Case Conference, three Thursdays per month, 8:00 a.m. Rotates between UAMS (7B33) and LRVAMC (3S) and ACH.
Neuropathology Conference, every Tuesday, 4:00 p.m. Rotates between UAMS (Shorey Building, 4th floor) and LRVAMC (Autopsy Room).
Neuroscience Conference (Basic), second, third, and fourth Monday, 8:00 a.m., UAMS 7B33.
Ob/Gyn Grand Rounds, each Wednesday, 7:30 a.m., UAMS Education Building, Room G/131B
Ophthalmology Problem Case Conference, each Thursday, 4:00 p.m., UAMS AAC Eye Clinic, Room 3/150.
Orthopaedic Basic Science Conference, each Tuesday, 11:00 a.m., UAMS Education Building, Room B/135
Orthopaedic Bibliography Conference, each Tuesday, 8:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Fracture Conference, each Tuesday, 7:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Grand Rounds, each Tuesday, 10:00 a.m., UAMS Education Building, Room B/135
Psychiatry Grand Rounds, each Friday, 11:00 a.m., UAMS Shorey Auditorium
St. Vincent Urology Grand Rounds, first Tuesday, 5:30 p.m., St. Vincent Infirmary, Education Building Room 159
Surgery Grand Rounds, each Saturday, 9:00 a.m., UAMS Education Building, Room G/131
Surgical Science Conference, each Saturday, 8:00 a.m., UAMS Education Building Room G/131
Urologic Topics, once or twice monthly, 5:00 p.m., UAMS
Urology Grand Rounds, twice monthly, 5:00 p.m., VAMC
Urology Morbidity and Mortality Workshop, last Wednesday, UAMS
Uro-Radiology Workshop, first Thursday, 5:00 p.m., UAMS
VA Medical Service Teaching Conference, each Thursday, 8:00 a.m., NLRVA, Building 66, Room 38
VA Research Methods Conference, first Wednesday, 12:00 noon, VAMC, Room 1E122
VA Surgery Grand Rounds, each Thursday, 12:45 p.m., VAMC, Room 2D109

VA Topics in Rehabilitation Medicine, each Thursday, 7:45 a.m., NLRVA Conference Room, Building 89L
VA Weekly Cancer Conference (Surgical Service), each Tuesday, 1:00 p.m., VAMC, Room 2D109

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, third Thursday, 7:00 a.m., Conference Room 1
Grand Rounds Conference, each Wednesday, 12:00 noon, Conference Room 1. Lectures and Case Presentations. A light lunch will be served.
Pathology Conference, third Tuesday, 3:00 p.m., Pathology Library. Case Presentations.
Pulmonary Conference, each Tuesday, 12:00 noon, Shuffield Auditorium. Lunch served for \$1.75.
Surgery Conference, each Thursday, 7:30 a.m., Shuffield Auditorium. Lectures and Case Presentations.

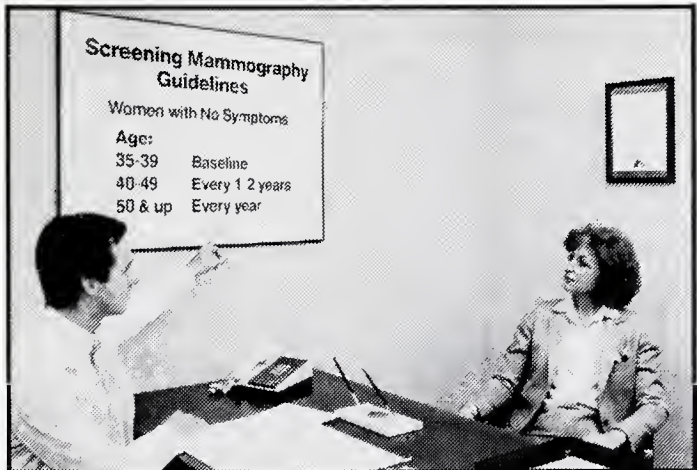
PINE BLUFF-AHEC

Behavioral Science Conference, each Thursday, 12:30 p.m., Jefferson Regional Medical Center
Chest Conference, second and fourth Friday, 12:30 p.m., Jefferson Regional Medical Center
Family Practice Conference, fourth Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Internal Medicine Conference, second and fourth Wednesday, 12:30 p.m., Jefferson Regional Medical Center
Obstetrics/Gynecology Conference, second Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Pediatric Conference, third Wednesday, 12:30 p.m., Jefferson Regional Medical Center
Radiology Conference, third Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Southeast Arkansas Medical Lecture Series, third Tuesday, 6:30 p.m., Rosswood County Club. Dinner meeting.
Sub-Specialty Conference, first Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Surgery Conference, first Wednesday, 12:30 p.m., Jefferson Regional Medical Center

TEXARKANA-AHEC

Chest Conference, third Wednesday, 12:30 p.m., St. Michael Hospital
Tumor Conference, first Wednesday, 7:00 a.m., St. Michael Hospital

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THINGS TO COME

JULY 23-25

Common Emergencies in General Medicine.

Sponsored by the University of Massachusetts Medical School, Berkshire Medical Center and Berkshire AHEC. Country Inn and Conference Center at Jiminy Peak, Hancock, Massachusetts. Sixteen Category I credit hours. Fee: \$295 (one conference); \$500 (two conferences). For further information contact: Berkshire AHEC, 725 North Street, Pittsfield, MA 01201; (413) 499-4161, ext. 2417.

JULY 23-25

Cardiology Update. Sponsored by the Institute for Medical Studies, Loyola University. Minneapolis, Minnesota. Category I credit to be announced. For further information contact: Lisa Krehbiel, Institute for Medical Studies, 30131 Town Center Drive, Suite 215, Laguna Niguel, CA 92677; (714) 495-4499.

JULY 27-31

Dynamic Psychotherapy: The Therapeutic Bond.

Sponsored by the University of Colorado School of Medicine. Given Institute of Pathobiology, Aspen, Colorado. Category I credit available. For further information, contact: UC School of Medicine, Office of Continuing Education, 4200 East Ninth Avenue, Box C-295, Denver, CO 80262; (303) 394-5195.

JULY 27-31

Sports Medicine Update 1987. Sponsored by the Office of Continuing Medical Education, UC San Diego School of Medicine. San Diego Princess at Vacation Village, San Diego, CA. Up to 29.5 credit hours available. Fee: \$325, physicians; \$225, allied health professionals and residents; \$30, each optional workshop. For further information contact: Office of Continuing Medical Education, UC San Diego School of Medicine, M-017, La Jolla, CA 92093; (619) 534-3940.

JULY 31-AUGUST 2

Pediatric Sports Medicine - North American Society of Pediatric Exercise Medicine (NASPEM).

Sponsored by the University of Colorado School of Medicine. Given Institute of Pathobiology, Aspen, Colorado. Category I credit available. For further information, contact: UC School of Medicine, Office of Continuing Education, 4900 East Ninth Avenue, Box C-295, Denver, CO 80262; (303) 394-5195.

AUGUST 3-6

Thirtieth Annual Pediatric Program. Sponsored by the University of Colorado School of Medicine. Given Institute of Pathobiology, Aspen, Colorado. Category I credit

available. For further information, contact: UC School of Medicine, Office of Continuing Education, 4900 East Ninth Avenue, Box C-295, Denver, CO 80262; (303) 394-5195.

AUGUST 6-11

Thirteenth Annual Primary Care Orthopedics.

Sponsored by the University of Colorado School of Medicine. Given Institute of Pathobiology, Aspen, Colorado. Category I credit available. For further information, contact: UC School of Medicine, Office of Continuing Education, 4900 East Ninth, Box C-295, Denver, CO 80262; (303) 394-5195.

AUGUST 20-21

1987 Regional Perinatal Conferences. Sponsored by the Arkansas High Risk Pregnancy Program, Department of Obstetrics and Gynecology and the Office of Continuing Education, UAMS AHECs. Stroud Hall, St. Bernard's Regional Medical Center, Jonesboro, AR. Six and three-quarter hours Category I credit. Fee: \$25 for physician and \$10 for nurses and other health professionals. For further information, contact: UAMS, Arkansas High Risk Pregnancy Program, 4301 West Markham, Slot 518, Little Rock, Arkansas 72205.

AUGUST 24-26

Cardiology Update. Sponsored by the Institute for Medical Studies. San Diego, California. Application has been submitted for fifteen hours of Category I credit. For further information, contact: Lisa Krehbiel, Institute for Medical Studies, 30131 Town Center Drive, Suite 215, Laguna Niguel, CA 92677; (714) 495-4499.

SEPTEMBER 2-3

Advanced Cardiac Life Support Provider Course.

Sponsored by the University of Kansas Medical Center. Student Center, Francisco Lounge, University of Kansas Medical Center. Thirteen and one-half Category I credit hours. Fees are to be announced. For further information, contact: David S. Baldwin, M.P.A., University of Kansas Medical Center, Office of Continuing Medical Education, 39th and Rainbow Blvd., Kansas City, KS 66103; (913) 588-4480.

SEPTEMBER 10-12

Advanced Doppler Echocardiography Seminar.

Sponsored by the Center for Medical Ultrasound, Bowman Gray School of Medicine. Innisbrook Resort Conference Center, Tarpon Springs, Florida. Seventeen Category I credit hours. For further information, contact: Registrar, Ultrasound Center, Bowman Gray School of Medicine, 300 S. Hawthorne Road, Winston-Salem, NC 27103; (919) 748-4505.

SEPTEMBER 12-17

American Academy of Family Physicians Congress of Delegates and Scientific Assembly. Sponsored by the AAFP. San Francisco, California. Congress of Delegates will meet September 12-14. Scientific Assembly will begin September 14 and continue through September 17. For further information contact: AAFP, 1740 West 92nd Street, Kansas City, MO 64114-3246; (816) 333-9700.

SEPTEMBER 25

Nutrition Concerns for Women: A Symposium for Health Professionals. Sponsored by the University of Kansas Medical Center. Kansas City, Kansas. Category I credit available. For further information, contact: Eileen Buttron, University of Kansas Medical Center, 39th and Rainbow Boulevard, Kansas City, Kansas 66103; (913) 588-4480.

NEWSMAKERS

Dr. James Russell, a Pocahontas family practitioner, and his wife Gail, are treating handicapped children to a new experience - horseback riding. With the help of two teachers, Cathy Neff and Mary Yopp, disabled children in the Pocahontas area are learning how to ride and take care of the animals. The children spend the first class familiarizing themselves with the horses and learning about the safety equipment such as helmets and safety belts.

The program is based on the theory that interaction with the animals gives the children much-needed exercise while improving their self-confidence.

Dr. Hoy B. Speer, Jr., a Stuttgart family practitioner, has been elected the new councilor for the third district of the Arkansas Medical Society. Dr. L. J. P. Bell is the senior councilor in that district.

Dr. Speer attended Ouachita Baptist University in Arkadelphia and is a 1971 graduate of the University of Arkansas for Medical Sciences. He had a family practice in Arkadelphia for two years before moving to Stuttgart.



He is the county health officer of Arkansas County, and a member of the Community Organization for Drug Education. He also is the past chairman of the annual fund drive for the Cancer Society.

Dr. Speer is married to Dr. Marolyn N. Speer and they have one daughter, Christine.

Aubrey J. Hough, Jr., M.D., chairman of the Pathology Department at UAMS, has been awarded a \$6,000 clinical fellowship from the American Cancer Society. The fellowship will be used for clinical oncology training.

The Bella Vista United Methodist Women recently attended a seminar on healthy aging conducted

by **Dr. Larry Wright**, a Rogers internist/geriatrician. Dr. Wright focused on common medical disorders associated with aging and preventive health measures.

Dr. Steven M. Thompson, a Benton pediatrician, was elected to a fellowship in the American Academy of Pediatrics recently. A minimum of five years post-medical school experience is required to become a Fellow.

"Hypertension" was the topic of **Dr. Clark Fincher**, an internist in Searcy, at a Breakfast Optimist Club meeting in Searcy.

Joe Turnbow, M.D., was named the Regional Coordinator for ACLS (Advanced Cardiac Life Support). Dr. Turnbow, an El Dorado emergency medicine physician, will coordinate activities in a four county area.

Dr. James Conn, a pathologist and sleep disorder specialist, conducted a sleep disorder seminar for physicians and other health care specialists at St. Bernards Regional Medical Center.

Krishna Reddy, M.D., and **Jose Abiseid, M.D.**, were two of the speakers at the Van Buren County Medical Hospital during National Hospital Week. Dr. Reddy, an internist from Clinton, spoke on diabetes and Dr. Abiseid, a Clinton family practitioner, discussed health disease and arthritis.

The American Academy of Facial Plastic and Reconstructive Surgery (AAFPRS) recently named **Carlton Lee Chambers, III, M.D.**, as their newest Fellow. Dr. Chambers is an otolaryngologist in Harrison.

Dr. Martin Fiser, a Little Rock allergist, spoke recently at the Rebsamen Regional Medical Center CME program. Dr. Fiser gave an update of the practice of allergy. He also spoke recently at the Faulkner County-Conway Hospital CMS conference about new developments in allergy.

NEW MEMBERS

LOGAN COUNTY MEDICAL SOCIETY

Chalfant, Charles H., Family Practice, Booneville. Born: May 31, 1934, Memphis, TN. Pre-medical education: University of Arkansas, B.S., 1959. Medical education: University of Arkansas for Medical Sciences. Internship: St. Vincent Infirmary. Military experience: U.S. Public Health Service. Practice experience: Rogers, two years; Booneville, fourteen years; Fayetteville, six years; and Midland/TX, two and one-half years. Board certified, family Practice. Member: American Academy of Family Physicians.

PULASKI COUNTY MEDICAL SOCIETY

Tamas, David E., Radiology, Little Rock. Born: November 14, 1955, Chicago, IL. Pre-medical education: David Lipscomb College, Nashville, TN, B.S., 1978. Medical education: Medical College of Georgia, Augusta, 1982. Internship: Medical College of Georgia, general surgery. Residency: Duke University Medical Center, Durham, North Carolina, radiology. Board certified, Radiology.

RANDOLPH COUNTY MEDICAL SOCIETY

Cannon, Donald C., Internal Medicine, Anatomical/Clinical Pathology, Pocahontas. Born: November 14, 1934, Independence, MO. Pre-medical education: Harvard College, A.B., 1956. Medical education: Washington University School of Medicine and University of Chicago School of Medicine, 1960. Internship: UCLA Hospital, Los Angeles. Residency: University of Chicago School of Medicine; University of Kansas School of medicine, Wichita. Military record: U.S. Public Health Service. Practice experience: Pocahontas, present; Wichita Falls, TX, two years; Houston, TX, eight years; Los Angeles, CA, four years; Chapel Hill, NC, one year. Board certified.

YELL COUNTY MEDICAL SOCIETY

Gatuz-Victorioso, Rebecca D., Ob/Gyn, Danville. Born: February 14, 1948, Philippines. Pre-medical education: University of Santo Tomas, B.S., 1967. Medical education: University of the East, 1973. Internship and Residency: Interfaith Medical Center, Brooklyn, NY. Board eligible.

IN MEMORIAM

DR. JOHN McCOLLOUGH SMITH

Dr. John McCollough Smith, a family practitioner for fifty-five years, died April 28. He had practiced forty-nine years in Little Rock.

Dr. Smith was a charter member and Fellow of the Academy of Family Practice. He was the President of the Pulaski County Medical Society in 1962 and as a member of the Arkansas Medical Society and American Medical Association.

Dr. Smith was chief of staff at St. Vincent Infirmary twice. He also was the team physician for the Tigers of Central High School for forty-two years and was the donor of a scholarship awarded to the school's outstanding athlete. He also was a Golden Gloves physician for this area.

Survivors are his wife, Marie Angehr Smith; two sons, Dr. Douglas Smith of Little Rock and Dr. Donald Smith of New York City; two daughters, Robin McCollough Smith of Bloomington, Ind., Sandra Smith Detwilder of Richardson, Tex., and Judith Smith Lee of Great Falls, VA.



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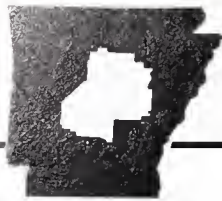
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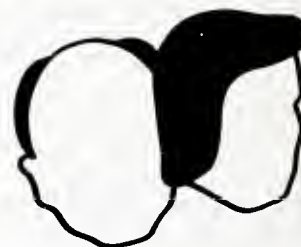
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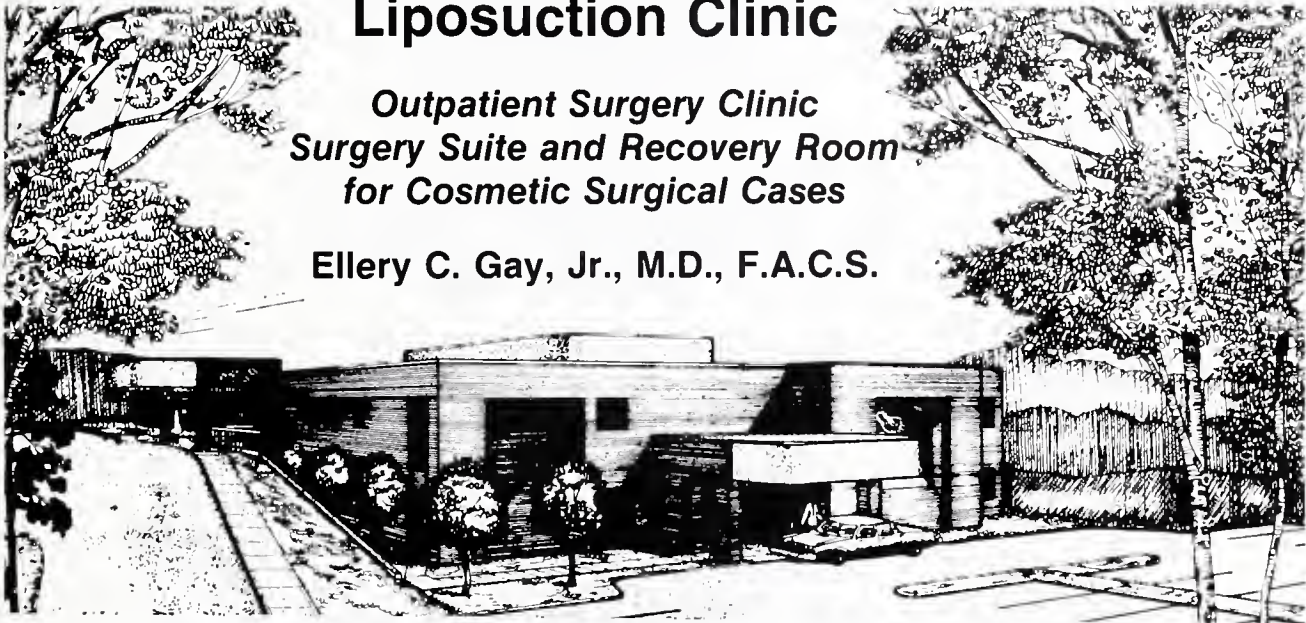
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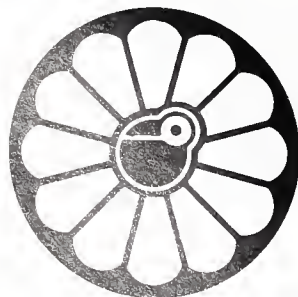
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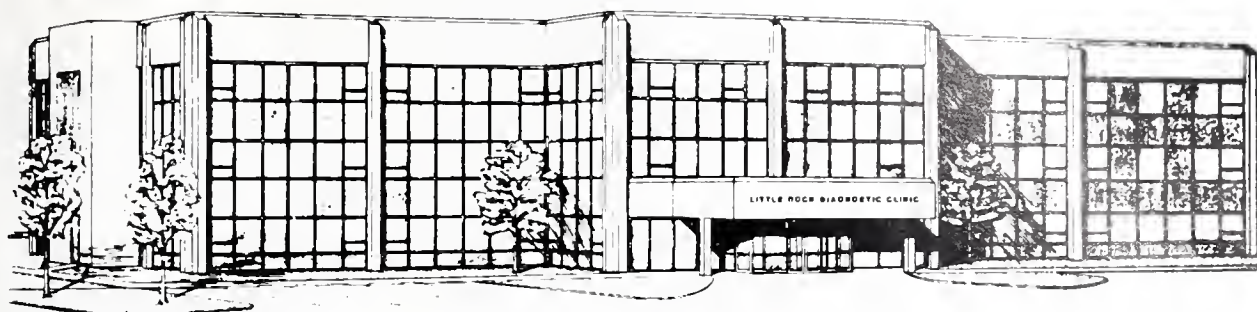
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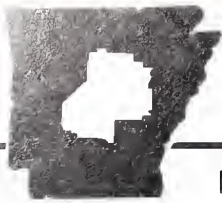
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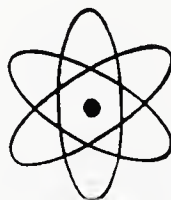
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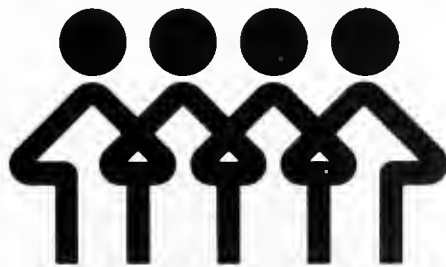
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Usage in Pregnancy: Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

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Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring

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The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs.

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Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.

Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.

Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.

Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.

Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion.

Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. IV administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for identification and treatment.

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Please see summary of product information on adjacent page.

THE **JOURNAL**
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Volume 84 Number 3

August, 1987

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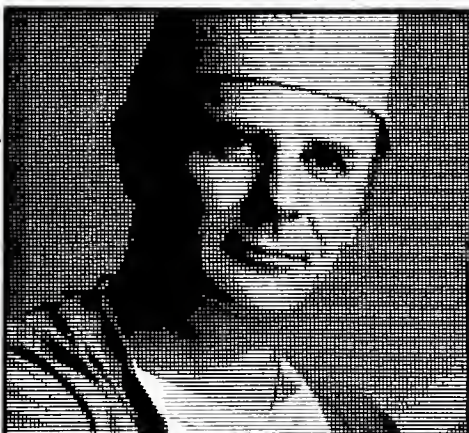
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Update: August 1987 The Safety and Supply of Blood in Arkansas

E. Clinton, Texer, Jr., M.D., Tony A. Flippin, M.D., and Byrdie McSwain, M.T. (ASCP) SBB*

Overview

AIDS is a major global health problem with over one hundred countries reporting cases to the World Health Organization in Geneva for a global total of more than 50,000 cases in 1987. In this country, AIDS has been primarily a disease involving homosexual and bisexual males and intravenous drug users. On-going studies show different patterns of the disease in other parts of the world, particularly Central Africa. Some of the information obtained from these studies may be pertinent in the future concerning the spread of AIDS. Evidence has already been found that other viral illnesses may have an effect on HIV virus, changing it from a dormant virus to a more active one causing the disease in the human cell.¹

AIDS is not transmitted by casual contact in the work place, the home, or at school. It is transmitted by body fluids. Although the virus has been identified in a variety of body fluids, the sexual transmission route by semen and reverse transmission of vaginal fluids are the main route of the spread. A secondary route of the spread is by blood, and particularly, by contaminated needles and syringes used by (IV) drug users.

Accidental transmission is uncommon and until recently, there were only three cases of AIDS in health care workers in relation to contaminated blood.

Although progress has been made by branches of the U.S. Public Health Service, the National Institutes of Health, and other research facilities worldwide in isolating the virus and developing tests for AIDS, we have no known effective treatment. AIDS patients have one hundred percent mortality.

AIDS in the United States

AIDS was first recognized as a new disease in 1981. By December 1985, there were 15,355 adult cases of AIDS and

AIDS-Related Complex (ARC) nationwide. Figures indicated that homosexual and bisexual males accounted for seventy-three percent of the AIDS cases and intravenous drug users accounted for seventeen percent. It was further estimated that one percent of the cases were persons who had had heterosexual contact with an AIDS patients. None of the risk factors, including the use of blood, were identified in six percent of the AIDS cases.

The June 1, 1987 figures, released from the Centers for Disease Control, showed an accumulated case total of 36,058 and 20,849 for an accumulated death total.

The major population group affected in the United States are homosexual and bisexual men. Many are involved in multiple sexual contacts and only one-third report the use of condoms, which affords considerable protection.

AIDS is being seen more in the mainstream heterosexual population. Heterosexual AIDS infection in the U. S. is expected to increase from the current four percent to ten percent by 1991.² Public health officials have renamed the category "high-risk group", referring to homosexual and bisexual men, with the term "high-risk behavior", which includes any multiple-partner intercourse.

AIDS in Arkansas

In December 1985, there were eleven AIDS cases in Arkansas. With the exception of Mississippi, most of our neighboring states had considerably larger numbers of known AIDS cases. There were 784 cases in Texas and 167 in Louisiana.

By June 1987, the number of AIDS cases in Arkansas (see inset) had risen to sixty; nineteen new cases were reported in the first five months in 1987. Approximately one-half of the total cases have died.

Carriers of the HIV Virus

Those individuals who are carriers of the virus identified by antibody test may be entirely asymptomatic for a substantial period of time. There is no way of knowing how

*University of Arkansas for Medical Sciences, 4301 West Markham, Slot 567, Little Rock, Arkansas 72205.

TOTAL COLLECTIONS BY BLOOD SERVICES/ARKANSAS REGION AND IMPORTS

	1984/1985	1985/1986	1986/1987
Total Collections	62,993	64,136	71,564
Imports	197 Whole Blood 7,365 Red Cells <u>1,925</u> Platelets 9,487	50 Whole Blood 7,453 Red Cells <u>50</u> Platelets 7,553	50 Whole Blood 7,453 Red Cells <u>50</u> Platelets 7,553

many people who are carriers will develop ARC or AIDS but it is thought that at least 150,000 Americans have ARC. It is also thought that some ARC patients with severe wasting syndromes and encephalopathies have died before an AIDS diagnosis could be made.

The longest investigation measuring the progress from HIV infection to AIDS was one reported at the Third International Conference on AIDS in San Francisco. From 1978 to 1980, 6,700 homosexual and bisexual men participated in a study of hepatitis B. An estimated seventy percent are now infected with HIV and about ten percent have AIDS according to the criteria for definition of the clinical illness. George Rutherford, of the Department of Public Health, reported on sixty-three who became infected prior to 1983, and an additional 112 men who later participated in a hepatitis vaccine trial. He predicted that an average of fifteen percent will develop AIDS over five years, twenty-four percent after six years, and twenty-six percent after six and a half years. This indicates that the risk of developing AIDS from HIV infection increases with time.³

Progress of the disease differs in some population groups. For example, AIDS apparently develops less frequently in hemophiliacs who received blood or blood products (antihemophilic factor or factor VIII). Even before the AHF was treated to kill HIV (or more recently the use of cryoprecipitate), no new cases of seropositivity for HIV have been seen.⁴ Of some 500 hemophiliacs who were positive for HIV and studied for a number of years, only two developed clinical AIDS. This appears to be related to the lack of promiscuity in this group.

There are ominous gaps in knowledge. Researchers' first efforts will be to guide physicians through the maze of progressive disease symptoms which are yielding valuable clues.

Transmission through Contaminated Blood

We became concerned with general problems of AIDS and its transmission because of the risk of contracting the virus through contaminated blood.

In 1982, 319 patients had died as a result of AIDS transmitted through blood transfusions. The majority of these patients were trauma cases or otherwise required large amounts of blood. Since December 23, 1985, the Centers for Disease Control has identified 282 transfusion-associated

cases. Two hundred and forty-eight cases are adults and 133 are transfusion-associated cases in hemophiliacs or other coagulation disorder patients.

It was estimated that one percent of all AIDS patients were hemophiliacs who had received multiple transfusions and two percent of the cases were associated with transfusions in non-hemophiliacs.

Fear developed in the population at-large and in the population of potential donors and consequently, the blood supply decreased. Between 1984 and 1985, the nationwide blood supply decreased fifteen to twenty percent. A decrease in the amount of donated blood was also noted at the Blood Services Arkansas Region of the American Red Cross, which supplies the majority of blood for the citizens of Arkansas.

As the number of productive units for whole blood, red cells and blood components decreased (Table I), the Arkansas Region had to increase its imports from other Red Cross Regions, an unforeseen expense. There might also have been an increased possibility that the blood imported could be contaminated with AIDS because of a higher carrier rate in the import area.

To calm the fears of our donors and potential donors, a media campaign was begun to convince the public that donation of blood was safe and that there was no risk of contracting AIDS. This campaign utilized newspapers, radio, public and commercial television, as well as individual seminars and talks given by knowledgeable people. Over a period of approximately eighteen months, the decrease in the donor base was reversed, and the number of productive units rose significantly.

We have no information on the number of individuals who are carriers. If the numbers obtained by the Red Cross Blood Services Arkansas Region are indicative of the rest of the state, the carrier rate is low, making blood obtained from Arkansas residents safer than blood imported from areas where AIDS is a more common problem.⁴ No blood is imported from high risk locations.

Safety Impact on the Arkansas Blood Supply

The results of the HIV antibody testing by the Red Cross Blood Services Arkansas Region are available for the period from March, 1985 through May, 1987. Total donors tested numbered 149,832. Of these, 961 were initially reactive and

282 were repeatedly reactive on ELISA testing. The people who have repeat reactive test results are being notified confidentially that they have had abnormal test results. Western blot tests were positive on fifteen of the repeatedly reactive donors. These people are also being notified and counselled.

Potential donors who are Western blot positive are put on permanent deferral by number so they can not donate blood in the future. The physician patient referrals are asked to consult with their personal physician.

Testing for AIDS was started in March, 1985 and continues to be mandatory for potential donors. In addition, the information questionnaire filled out by blood donors is much more explicit and excludes anyone who has had admitted homosexual activity since 1977. The symptoms and signs of AIDS are on the questionnaire and a person can indicate if blood should not be donated for various reasons. Similarly, persons can mail in a card indicating blood should not be given.

The “Look-Back” Program

The “look-back” program was initiated in 1986 by the National Headquarters of the American Red Cross. We were instructed to look at those donors since 1977 who were subsequently found to be positive for HIV antibody, confirmed by the Western blot. As of March 31, 1987, fourteen donors were found positive by this criteria. The “look-back” process is continuing for six of these donors. The process was not conducted on eight donors because seven were found positive during their first donation; one was found during the first donation after 1977.

Four blood products which were imported are in the “look-back” process; three have been completed; one is still under investigation. One of the recipients of contaminated import units was found Western blot positive, and one tested negative.

Arkansas Region has been notified of three AIDS patients who donated blood in our area and required a “look-back” procedure. This process has been completed on two of these patients and the third is on-going. Two recipients of blood or blood products were tested and had negative results. The two other recipients have not been located at this time.

The military has reported that three of their donors tested were found to be HIV positive by Western blot. As of March 31, 1987, one case has been completed and two are on-going.

The most recent information is that there are now sixteen donors who are positive for HIV antibody. No cases of Western blot proven AIDS have been found as a result of use of blood drawn in Arkansas. One unit which was imported from another region was among a large number of units which were given to a trauma patient in another state.

Educational Efforts in Arkansas

Some of us have participated in educational efforts concerning AIDS in the past. The National Headquarters of the American Red Cross has been helpful in developing an excellent three-part video tape and the American Hospital Association has had nationwide closed-circuit video conferences. There has been close cooperation between the Arkansas Department of Health and other agencies.

The key role of physicians in the educational process was highlighted in a recent article in Medical World News.⁴ Telling a patient that he harbors the AIDS virus is not the

Arkansas AIDS Statistics*

The numbers to the right of the totals indicate the amount of change since the previous month's report which appeared in the Journal. No change = (NC).

Cases reported as of July 22	63 (+3)
Deaths as of July 22	39 (+9)
Cases reported since January 1	23 (+3)

Cases	Race
Male 58 (+1)	White 49 (+2)
Female 5 (+2)	Black 13 (NC)
	Unknown 1 (+1)

Risk Groups	Age Groups
Homo/Bisexual** 51 (NC)	< 20 0*** (-1)
IV Drug User 6 (+2)	20-29 24 (+2)
Hemophiliac 0 (NC)	30-39 24 (+1)
Transfusion 2 (NC)	40-49 12 (NC)
Heterosexual 3 (+1)	50-59 2 (+1)
Unknown 1 (NC)	60 or > 1 (NC)

**Of the 51 homo/bisexual AIDS patients, 16 are/were IV drug users.

*The Health Department adjusted this number. Last month showed 1 in this category.

*Source: Arkansas Health Department

end of the process, but the beginning. Physicians must stay abreast of the growing number of the prognostic indicators and still engender trust of the patient in the face of a complex disease. Pittsburgh researcher Charles Rinaldo said, “We really have to race to keep up with everything, but we need to know more than we do now.”

One of the priorities of the newly-formed Arkansas Medical Society Committee on AIDS has been to initiate a

pr... educate its members about AIDS. A survey of 444 members was conducted and the response has been very good (see inset). The doctors participating in the seminars will educate their patients on risk factors and behavior which could expose them to infection. A statewide seminar will be held in Little Rock and in major population areas across the state.

STAND UP AND BE COUNTED

Last month, Arkansas Medical Society members were sent a survey card concerning their interest in attending/teaching seminars on AIDS. The early results are shown below.

Total number of cards sent:	2,200
Response to date:	362
Counties Responding:	43
Active Interest:	155
Total Interest in Seminar:	251
Interest in Seminar only	117
No Interest:	89

Would You:

Be on team of physician teachers in your area of the state?

103 Yes 0 No

Serve as primary care physician for a patient who is AIDS virus (HIV antibody) positive or has been diagnosed as having AIDS/ARC?

103 Yes 0 No

Provide pre- and post-test counseling for patients screened for AIDS virus (HIV) antibodies?

131 Yes 26 No

Attend a seminar November 12 to hear nationally-known speakers lecture about AIDS?

251 Yes 23 No

Parents and teachers will be taught how to bring sexual education into the classroom at an early age. Behavioral change will be required for this expanded educational effort to be successful.

There is also a great need for members of the Arkansas Medical Society, and all Arkansas physicians to care for victims of the AIDS virus and to counsel them and their families. Physicians are needed to speak before groups of physicians, health professionals and the public.

At some point, there may be a need for appropriate legislation to meet the challenges and epidemic spread of the AIDS problem in relation to preserving the health of the nation as well as the confidentiality and individual liberties of the AIDS carrier person.

AIDS Testing Controversial

There are problems concerning the test itself. The early ELISA test kits had high false-positive rates. Test results in children can be difficult to interpret. Part of the problem with the current ELISA tests for antibody is that they were set up to screen for many infections of the blood, and not specifically for HIV virus. The cut-off points were set between the test being positive or negative to screen poten-

tial blood donors and not to screen the population at large. Newer tests are currently under study which will detect antigens and which will take less time, be less expensive and will have a lower degree of false positivity.

The current ELISA has an inherent high degree of false positivity, a positive test resulting from any number of viral infections or certain drugs. That is why a repeat ELISA test is required. Less than thirty percent of those retested are again positive. Of this thirty percent, only five percent will have a positive confirmation by a positive Western blot test. Thus, of those having one positive ELISA test, less than 1.6% will be confirmed as carriers of the HIV virus according to current criteria. The remaining 98.4% of those tested will be relegated to an uncertain status and will be retested.

These numbers are derived from our experience with testing of all potential donors at Red Cross Blood Services, Arkansas Region from March 1985 through May, 1987. These percentages are similar to those of other blood centers of the American Red Cross nationally, although our carrier rate is one of the lowest in the nation. A similar low rate for hepatitis B was found for the same period, although hepatitis B is about 3,000 times more likely to be transmitted to others by contaminated blood or blood products than AIDS.

The tests for AIDS antibody have a high sensitivity, but a lower specificity, which leads to large numbers of "false positives" on initial testing. Furthermore, as we do not have a test available for the antigen; a person may carry the HIV virus for up to three months or longer before the ELISA antibody test becomes positive. This "window period" has also been observed in hepatitis B, before the surface antigen becomes positive for the hepatitis B carrier.⁵ Thus, a person may be a carrier of the AIDS virus without being positive on blood testing.

Screening for AIDS and what should be done if a person is found to be a carrier generates many disturbing questions. The question concerning compulsory testing for AIDS has raised both legal and ethical issues. The consensus reached by more than 800 public health officials is that only voluntary testing should be retained.² The demand for the testing could intensify as AIDS gains a stronger foothold in the general population.

A three-week pilot study of the general hospital population by Walter Reed Army Center reported that the overall prevalence of unsuspected HIV infections vary from 3.7 per thousand to 5.9 per thousand. They also noted that the prevalence of the HIV virus among the Red Cross donors

Before prescribing, see complete prescribing information in SK&F CO. literature or PDR. The following is a brief summary.

WARNING

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K⁺ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K⁺ intake. Associated widened QRS complex or arrhythmia requires prompt additional therapy. Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.

Precautions: The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity. Theoretically, a patient transferred from the single entities of triamterene and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Angiotensin-converting enzyme (ACE) inhibitors can elevate serum potassium; use with caution with 'Dyazide'. Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin [ACTH]). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is uncommon with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function. Thiazides may add to or potentiate the action of other antihypertensive drugs. Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and respiratory distress including pneumonitis and pulmonary edema, transient blurred vision, sialadenitis, and vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with other usual calculus components. Rare incidents of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.

Supplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 1000 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only); in Patient-Pak™ unit-of-use bottles of 100.

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Percent of patients ulcer-free after 1 year of therapy

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150 mg h.s. (n = 60)

84%*

cimetidine

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57%

ZANTAC

150 mg h.s. (n = 243)

77%†

cimetidine

400 mg h.s. (n = 241)

63%

*P = 0.01 †P = 0.0004 % life-table estimates

All patients were permitted prn antacids for relief of pain.
Adapted from Silvis¹ and Gaugh²

These two trials^{1,2} used the currently recommended dosing regimen of cimetidine (400 mg h.s.) and ranitidine (150 mg h.s.). A comparison of other dosing regimens has not been studied.

The studied dosing regimens are not equivalent with respect to the degree and duration of acid suppression or suppression of nocturnal acid.

The superiority of ranitidine over cimetidine in these trials indicates that the dosing regimen currently recommended for cimetidine is less likely to be as successful in maintenance therapy.

***Zantac*[®] 150 h.s.**
ranitidine HCl/Glaxo 150 mg tablets



See next page for references and Brief Summary of Product Information.

ZAN375

July 1987

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ZANTAC® 150 Tablets
(ranitidine hydrochloride)
ZANTAC® 300 Tablets
(ranitidine hydrochloride)

**BRIEF SUMMARY OF
PRODUCT INFORMATION**

The following is a brief summary only. Before prescribing, see complete prescribing information in ZANTAC® product labeling.

INDICATIONS AND USAGE: ZANTAC® is indicated in:

1. Short-term treatment of **active duodenal ulcer**. Most patients heal within four weeks.
2. **Maintenance therapy** for duodenal ulcer patients at reduced dosage after healing of acute ulcers.
3. The treatment of **pathological hypersecretory conditions** (eg, Zollinger-Ellison syndrome and systemic mastocytosis).
4. Short-term treatment of **active, benign gastric ulcer**. Most patients heal within six weeks and the usefulness of further treatment has not been demonstrated.
5. Treatment of **gastroesophageal reflux disease (GERD)**. Symptomatic relief commonly occurs within one or two weeks after starting therapy and is maintained throughout a six-week course of therapy.

In active duodenal ulcer; active, benign gastric ulcer; hypersecretory states; and GERD, concomitant antacids should be given as needed for relief of pain.

CONTRAINDICATIONS: ZANTAC® is contraindicated for patients known to have hypersensitivity to the drug.

PRECAUTIONS: Symptomatic response to ZANTAC® therapy does not preclude the presence of gastric malignancy.

Since ZANTAC is excreted primarily by the kidney, dosage should be adjusted in patients with impaired renal function (see **DOSAGE AND ADMINISTRATION**). Caution should be observed in patients with hepatic dysfunction since ZANTAC is metabolized in the liver.

False-positive tests for urine protein with Multistix® may occur during ZANTAC therapy, and therefore testing with sulfosalicylic acid is recommended.

Although recommended doses of ZANTAC do not inhibit the action of cytochrome P-450 enzymes in the liver, there have been isolated reports of drug interactions which suggest that ZANTAC may affect the bioavailability of certain drugs by same mechanism as yet unidentified (eg, a pH-dependent effect on absorption or a change in volume of distribution).

Lack of experience to date precludes recommending ZANTAC for use in children or pregnant patients. Since ZANTAC is secreted in human milk, caution should be exercised when administered to a nursing mother.

ADVERSE REACTIONS: Headache, sometimes severe, seems to be related to ZANTAC® administration. Constipation, diarrhea, nausea/vomiting, and abdominal discomfort/pain have been reported. There have been rare reports of malaise, dizziness, somnolence, insomnia, vertigo, tachycardia, bradycardia, premature ventricular beats, and orthologias. Rare cases of reversible mental confusion, agitation, depression, and hallucinations have been reported, predominantly in severely ill elderly patients.

In normal volunteers, SGPT values were increased to at least twice the pretreatment levels in 6 of 12 subjects receiving 100 mg qid IV for seven days, and in 4 of 24 subjects receiving 50 mg qid for five days. With oral administration there have been occasional reports of reversible hepatitis, hepatocellular or hepatocellular or mixed, with or without jaundice.

There have been rare reports of reversible leukopenia, granulocytopenia, thrombocytopenia, and pancytopenia.

Although controlled studies have shown no antiandrogenic activity, occasional cases of gynecomastia, impotence, and loss of libido have been reported in male patients receiving ZANTAC, but the incidence did not differ from that in the general population.

Incidents of rash, including rare cases suggestive of mild erythema multiforme, and, rarely, alopecia, have been reported, as well as rare cases of hypersensitivity reactions (eg, bronchospasm, fever, rash, eosinophilia) and small increases in serum creatinine.

OVERDOSAGE: Information concerning possible overdosage and its treatment appears in the full prescribing information.

DOSAGE AND ADMINISTRATION: Active Duodenal Ulcer: The current recommended adult oral dosage is 150 mg twice daily. An alternate dosage of 300 mg once daily at bedtime can be used for patients in whom dosing convenience is important. The advantages of one treatment regimen compared to the other in a particular patient population have yet to be demonstrated.

Maintenance Therapy: The current recommended adult oral dosage is 150 mg at bedtime.

Pathological Hypersecretory Conditions (such as Zollinger-Ellison Syndrome): The current recommended adult oral dosage is 150 mg twice a day.

In some patients it may be necessary to administer ZANTAC 150-mg doses more frequently. Doses should be adjusted to individual patient needs, and should continue as long as clinically indicated. Doses up to 6 g/day have been employed in patients with severe disease.

Benign Gastric Ulcer: The current recommended adult oral dosage is 150 mg twice a day.

GERD: The current recommended adult oral dosage is 150 mg twice a day.

Dosage Adjustment for Patients with Impaired Renal Function: On the basis of experience with a group of subjects with severely impaired renal function treated with ZANTAC, the recommended dosage in patients with a creatinine clearance less than 50 ml/min is 150 mg every 24 hours. Should the patient's condition require, the frequency of dosing may be increased to every 12 hours or even further with caution. Hemodialysis reduces the level of circulating ranitidine. Ideally, the dosage schedule should be adjusted so that the timing of a scheduled dose coincides with the end of hemodialysis.

HOW SUPPLIED: ZANTAC® 300 Tablets (ranitidine hydrochloride equivalent to 300 mg of ranitidine) are yellow, capsule-shaped tablets embossed with "ZANTAC 300" on one side and "Glaxo" on the other. They are available in bottles of 30 (NDC 0173-0393-40) and unit dose packs of 100 tablets (NDC 0173-0393-47).

ZANTAC® 150 Tablets (ranitidine hydrochloride equivalent to 150 mg of ranitidine) are white tablets embossed with "ZANTAC 150" on one side and "Glaxo" on the other. They are available in bottles of 60 tablets (NDC 0173-0344-42) and unit dose packs of 100 tablets (NDC 0173-0344-47).

Store between 15° and 30°C (59° and 86°F) in a dry place. Protect from light. Replace cap securely after each opening.

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October 1986

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in the Washington D.C. area has been reported to be 1.1 per thousand. They make the analogy that hospital admissions screening played an important role in our recognition and control of undiagnosed syphilis in the past. In the case of AIDS, routine testing of all hospital admissions could be similarly effective.⁶

American Medical Association Policy

In a major new policy statement on AIDS, the American Medical Association has approved a wide-ranging set of recommendations which may set the stage for development of national policy on prevention and control of disease.⁷

The AMA's policy on AIDS recommends mandatory testing of donors of blood and blood fractions, organs, tissues, semen and ova; inmates in federal and state prisons; immigrants to the United States; and military personnel.

The AMA also recommends routine voluntary testing (with informed consent) for individuals who are from areas with a high incidence of AIDS or who engage in high-risk behavior. These include patients seeking treatment at clinics for sexually transmitted disease; drug abuse clinics; pregnant women in their first trimester; people seeking family planning services; and patients who require surgical or other invasive procedures. If the voluntary policy is not sufficiently accepted by such patients, the hospital and medical staffpersons may consider implementing a mandatory program.

As a matter of medical judgement, voluntary testing should be encouraged for individuals whose history or clinical status warrants this measure. Testing should especially be encouraged for anyone who is homosexual, has a history of intravenous drug use, or who is the sexual partner of anyone in these groups.

Summary and Conclusion

AIDS is a major global health problem and is now the leading cause of death of men in their twenties and thirties in some areas of the United States.

AIDS is a sexually transmitted disease in which the exchange of body fluids is the mode of transmission. Secondary spread is by blood, particularly by contaminated needles and syringes by IV drug users. It is not transmitted by casual contact and accidental transmission to health care workers is extremely rare.

In the United States, AIDS and ARC have primarily involved homosexual and bisexual men (73%) and intravenous drug users (17%). By December 1985, the CDC had

identified 282 transfusion-associated cases (3%). Of these, one percent were hemophiliacs and other coagulation disorders, and two percent were in the general population. These cases were usually related to multiple transfusions of blood or blood products. AIDS is entering into the mainstream heterosexual population by promiscuous sexual intercourse and is expected to increase from the current rate of four percent to ten percent by 1991.

Because AIDS can be transmitted by blood, it was erroneously thought that blood donors could contract AIDS. In 1984-85, Arkansas collections declined, mirroring the nationwide trend. Testing for AIDS in donors began in March 1985, and clinical screening was improved to exclude high-risk persons from donating. To combat the fear of donating blood, educational materials were developed. This successful campaign utilized all media and the total collection of blood in Arkansas rose to a new high. The results of ELISA testing and follow-up studies have shown that far and away Arkansas' donated blood is safe. An extremely small percentage of potential donors come up with repeat positive ELISA test results *and* a positive Western blot test. No cases of AIDS have been associated with the use of Arkansas blood.

The Arkansas legislature has mandated involvement of the Departments of Health and Education and University of Arkansas for Medical Sciences in educational efforts. The Arkansas Medical Society has established a committee on AIDS, in collaboration with health professionals and other agencies, will begin the task of educating physicians throughout the state. These physicians will in turn educate their patients and the public on the facts about AIDS and its transmission. It must be stressed in the educational sessions that until a cure is found, behavior modification is the main defense against the spread of AIDS. This is the cornerstone upon which our educational efforts must be based.

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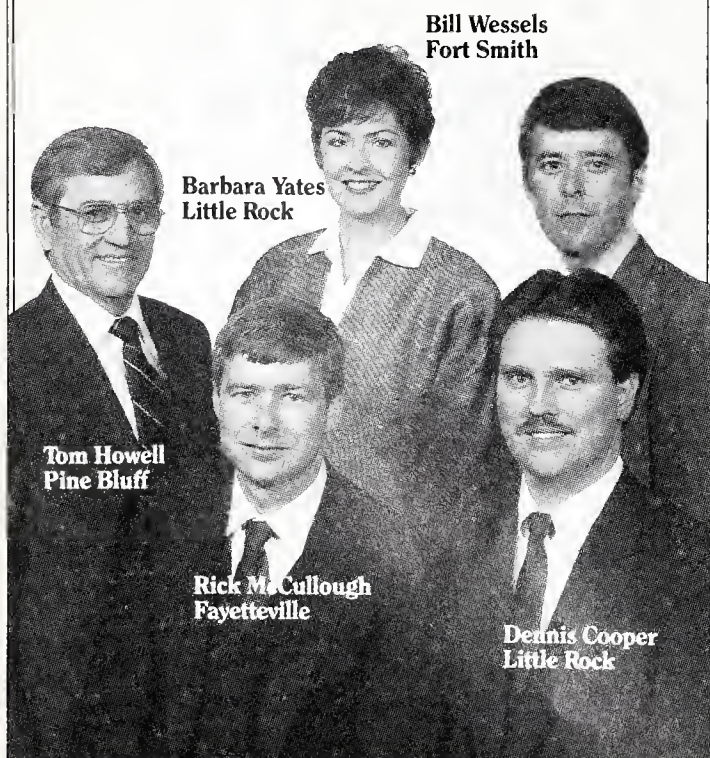
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Current Management of Carotid Artery Disease

Robert W. Barnes, M.D.*

Introduction

Physicians and the public alike are becoming increasingly aware of the controversies about the most appropriate therapy of carotid artery disease. Because of the increasing focus of the media on this problem, it is imperative that physicians minimize misconceptions and bias when managing patients with cerebrovascular disease. Because of the author's interest in clinical investigation of diagnostic and therapeutic methods to evaluate these patients, the following is designed to review the important principles of classifying, diagnosing and treating patients with suspected extracranial carotid disease.

Classification

Patients with suspected cerebral vascular disease should be classified into three categories: 1) symptomatic patients, 2) atypically symptomatic patients, and 3) asymptomatic patients. *Symptomatic* patients have experienced focal neurologic deficits, usually of abrupt onset, which may be transient ischemic attacks (TIAs, lasting less than 24 hours) or strokes (lasting more than 24 hours). Strokes may leave permanent neurologic deficits or may be associated with incomplete or complete recovery. Strokes that recover completely within three weeks are often termed reversible ischemic neurologic deficits (RIND). Neurologic symptoms may occur in either the carotid or vertebrobasilar territories. Carotid-territory deficits involve either ocular or hemispheric manifestations. Ocular symptoms may include transient monocular blindness (TMB or amaurosis fugax) or permanent monocular visual defects (retinal infarct). Hemispheric manifestations of carotid artery disease include contralateral motor or sensory disturbances or speech defects if the dominant hemisphere is involved. Vertebrobasilar symptoms include deficits of cranial nerve function, disorders of equilibrium, and unilateral or bilateral synchronous or asynchronous motor or sensory deficits.

Patients with *atypical symptoms* include those with nonlateralizing symptoms of dizziness, bilateral visual disturbances, memory deficits, syncope or headache. Because

patients with vertebrobasilar insufficiency (VBI) often have atypical symptoms, I usually include such patients in the category of the atypically symptomatic patient.

Asymptomatic patients are often discovered in one of three circumstances: 1) an incidental cervical bruit, 2) an asymptomatic lesion discovered on arteriography contralateral to a symptomatic lesion, and 3) a pre-operative patient discovered to have asymptomatic bruit or noninvasive evidence of significant carotid disease.

Appropriate classification of patients as symptomatic, atypically symptomatic, or asymptomatic is important in order to plan appropriate diagnosis and therapy.

Diagnostic Techniques

Clinical Evaluation

At the bedside, a physician is ill-equipped to determine with certainty whether or not a patient has extracranial carotid occlusive disease. However, the clinician must take a careful history to appropriately classify the patient and then carry out the following important facets of the physical examination. First, the blood pressure should be determined in *both* arms. Patients with symptomatic subclavian steal may be detected by an abnormally low systolic blood pressure in the arm affected by the subclavian obstruction (a systolic pressure 20 mmHg or greater below that of the contralateral extremity).

Second, pulse deficits should be elicited, although reduced or absent pulses are infrequently present in patients with cerebral vascular disease. An absent temporal pulse

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internal carotid artery obstruction. An absent carotid artery pulse is uncommon. Unfortunately, significant internal carotid artery stenosis or occlusion does not usually affect the strength of the carotid pulse. Reduced pulses in the upper extremity may suggest subclavian artery obstruction and possible subclavian steal syndrome. The presence of any cervical bruit is often interpreted as carotid bruit. However, bruits in the supraclavicular space suggest subclavian or innominate artery stenosis. A bruit over the common carotid artery low in the neck suggests proximal common carotid stenosis (or innominate artery stenosis). A bruit at the carotid bifurcation near the angle of the mandible may result from either internal or external carotid stenosis or both. If the bruit extends into diastole, a severe stenosis of the internal carotid artery is present. A bruit behind the sternocleidomastoid muscle or along the lateral border of the cervical vertebrae suggests vertebral artery stenosis. A bruit over the eye suggests stenosis of the internal carotid artery intracranially (carotid siphon). Finally, a complete neurologic examination should be carried out, including careful inspection of the fundi to search for retinal artery emboli (Hollenhorst plaques).

Noninvasive Studies

Noninvasive carotid artery studies include indirect (periorbital) and direct carotid screening techniques. *Indirect* tests include periorbital Doppler ultrasound and ocular plethysmography. I prefer to use the oculopneumoplethysmograph (OPG-Gee) which detects severe carotid obstruction (greater than 75% diameter-reducing stenoses or occlusions of the internal carotid artery) and also permits assessment of the cerebral collateral circulation via the circle of Willis. *Direct* carotid studies include Doppler flow velocity analysis and real-time ultrasonic imaging, or their combination (duplex scanning). These noninvasive techniques are useful not only for detection of extracranial carotid artery disease but also to monitor patients during carotid endarterectomy and to evaluate patients during the early and late post-operative periods.¹ In addition, these techniques are useful to select the most appropriate technique of angiographic visualization of the carotid arteries in patients who are candidates for possible carotid endarterectomy.

Angiography

Patients who are considered possible candidates for operation should undergo angiography to document the presence of a surgical lesion in the extracranial cerebral vascular circulation. Recent advances in radiology have permitted a choice of techniques to visualize the cerebral circulation. Intravenous digital subtraction angiography (IVDSA) permits visualization of extracranial cerebral vascular anatomy through intravenous injections of contrast media. While avoiding the risk of intra-arterial angiography, this technique provides less satisfactory resolution of the cerebral arteries and also may be associated with inadequate visualization due to vessel overlap, patient motion or

swallowing artefacts. I prefer to order an out-patient IVDSA only for patients in whom noninvasive studies suggests an internal carotid artery occlusion or a severe stenosis. Intra-arterial digital subtraction angiography (IADSA) allows improved image resolution and selective arterial injection with relatively low doses of contrast media. Because such studies can be carried out with relatively small catheters, out-patient arteriography is possible with this technique. I prefer to order an IADSA for patients with noninvasive evidence of moderate stenosis of the internal carotid artery or for patients in whom I suspect lesions of the aortic arch vessels or intracranial arteries. Conventional four-vessel arteriography remains the diagnostic standard for evaluating patients with cerebral vascular disease. This technique provides maximum image resolution, although it is of a slightly greater risk to the patient. I would order a conventional arteriogram on patients with cerebral symptoms in whom noninvasive studies suggest little or no extracranial carotid occlusive disease. Such studies are also useful for patients with suspected carotid ulceration or for patients with suspected vertebral artery disease.

Therapy

Medical Therapy

The current controversy regarding the propriety of carotid endarterectomy in patients with cerebral vascular disease assumes that an efficacious medical therapy exists. However, there is abundant literature regarding anticoagulation or antiplatelet therapy which fails to unequivocally support a medical regimen which consistently reduces the risk of stroke. Although heparin may be used during the initial hospitalization of patients with recent transient ischemic attacks or stroke, long-term anticoagulation may have limited role in patients with cerebral vascular disease except for those with a cardiac source of emboli. The majority of recent articles suggest that aspirin or other antiplatelet therapy is efficacious in reducing stroke, although most studies fail to achieve statistical significance unless all neurologic and cardiovascular endpoints (TIA, stroke, and death) are combined in the statistical analyses. Such studies suggest an effect of aspirin in males but not in females. Most studies suggest that cardiovascular events can be reduced from an incidence of about thirty percent to fifteen percent by aspirin therapy. Nevertheless, the role of aspirin in definitely reducing stroke risk remains to be determined. While such agents are often prescribed for asymptomatic patients, there have been no studies to document the value of antiplatelet therapy in patients without symptoms.

Surgical Therapy

In experienced hands, carotid endarterectomy can be performed with a combined morbidity and mortality rate of under three percent. Unfortunately, this fact has led many surgeons to apply this operation indiscriminately to patients with detectable extracranial carotid artery lesions. The fact

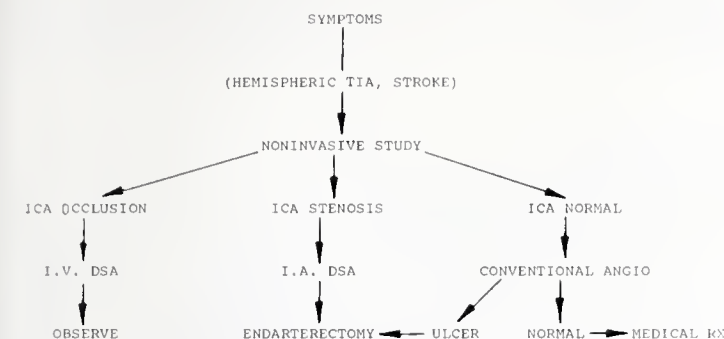


Figure 1. Algorithm for the management of patients with suspected carotid-territory symptoms.

that this operation is currently the most common vascular procedure performed in the United States (over 100,000 operations performed in 1985 alone) has led many individuals to question the merits of this procedure, particularly when applied to asymptomatic patients. I believe that patients with unequivocal ocular or hemispheric symptoms in the territory of an appropriate carotid artery lesion are candidates for carotid endarterectomy. In addition, some patients with severe carotid stenosis associated with atypical symptoms of cerebral ischemia or vertebral basilar insufficiency may be benefited by this procedure. Finally, some select patients with severe carotid stenosis (greater than 75%) may also be considered for prophylactic carotid endarterectomy. However, for the majority of patients with asymptomatic carotid bruit or disease, the future risk of stroke may be no greater than the risk of the operative procedure.² Currently, several prospective clinical trials are designed to test this hypothesis.

Patients with disabling symptoms from the subclavian steal syndrome may be candidates for carotid-subclavian bypass. However, the majority of patients with subclavian steal are asymptomatic and may be safely observed. Patients with severe disabling symptoms of vertebral basilar insufficiency are often helped by carotid endarterectomy of a severely stenotic carotid lesion. However, some patients have posterior circulation insufficiency due to vertebral artery lesions alone which, if present, may be benefited by direct vertebral artery reconstruction. I prefer to carry out a vertebral-carotid transposition in the majority of these patients.

Recommended Management

Symptomatic Patients

Figure one depicts an algorithm which I used to manage patients with symptoms of ocular or hemispheric manifes-

tations of carotid-territory ischemia. Such patients are considered potential candidates for carotid endarterectomy and are candidates for angiography. However, the selection of the most appropriate technique of angiography is based upon an initial noninvasive carotid study. If the noninvasive study suggests internal carotid artery occlusion, I would order an intravenous DSA as an out-patient. If an internal carotid occlusion is confirmed, I recommend observation of the patient. If the noninvasive study reveals an internal carotid artery stenosis, an out-patient intra-arterial DSA study is performed which, if documenting a stenosis, would lead to an appropriate carotid endarterectomy. If the noninvasive study shows minimal or no carotid artery disease, a conventional four-vessel cerebral arteriogram is obtained. If an ulcerated internal carotid artery is found, carotid endarterectomy is recommended. If the study shows minimal or no carotid artery disease, medical therapy is advised, usually low-dose aspirin therapy (60-300 mgs daily).

Atypically Asymptomatic Patients

Figure two shows an algorithm for evaluation and management of patients with symptoms of vertebral basilar insufficiency or nonspecific (global) symptoms. An initial noninvasive study is carried out to plan appropriate angiographic investigation. If an internal carotid artery occlusion is found, this may be validated by an out-patient intravenous DSA and the patient subsequently observed. If an internal carotid artery stenosis is found, an inter-arterial DSA is performed and if stenosis is documented, a carotid endarterectomy is recommended. If subclavian obstruction is found on the noninvasive study, an out-patient intra-arterial DSA is carried out to document a subclavian steal syndrome which, if present, may lead to a carotid-subclavian bypass. If the noninvasive study is normal, the patient may

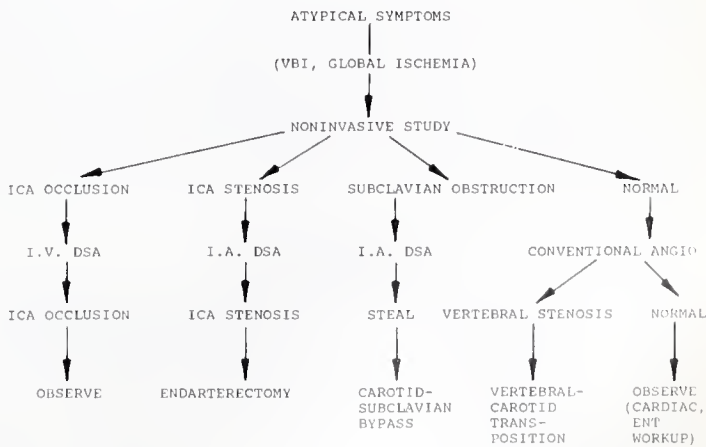


Figure 2. Algorithm for the management of the patient with suspected atypical symptoms of vertebral basilar insufficiency or global cerebral ischemia.

However, if persistent symptoms develop, a vertebral arteriogram is performed to identify the possible presence of vertebral artery stenosis. If present, vertebral reconstruction may be carried out, such as vertebral-carotid transposition. If, however, the arteriogram is normal, the patient may be observed, although a complete cardiac and otolaryngologic work-up should be performed to rule out other sources of symptoms mimicking cerebral ischemia.

Asymptomatic Patients

Figure three depicts the algorithm for evaluation of patients with suspected asymptomatic carotid bruit or disease. An initial noninvasive study is particularly helpful in these patients.³ If the study is normal, the patient may be reassured. If the noninvasive study suggest stenosis of the external carotid artery or the subclavian artery as a cause of the cervical bruit, such patients may be followed for the development of cerebral vascular disease progression. If an internal carotid artery stenosis is present, the severity of the lesion dictates the method of management. If the stenosis reduces the carotid lumen by less than fifty percent, the patient may be safely followed and educated about the character and importance of transient ischemic attacks. If the patient becomes symptomatic, then an arteriogram and endarterectomy may be performed. If the internal carotid stenosis ranges between fifty and seventy-five percent in severity, the management is based upon the degree of cerebral collateral circulation. If the OPG-Gee study performed during transient common carotid compression suggests good collateral circulation, the patient is followed and educated about the symptoms of transient ischemic attacks. Carotid endarterectomy is carried out only if symptoms develop or the carotid disease progresses by serial noninvasive studies. If, however, the OPG-Gee studies suggests poor hemispheric collateral circulation, or if the contralateral carotid is severely stenotic or occluded, a carotid endarterectomy is recommended. Finally, if the internal carotid stenosis is severe (greater than seventy-five percent), a carotid endarterectomy is advised, because recent prospective noninvasive studies suggest that such lesions may lead to future stroke at a risk that is greater than the risk of operation. Our patients with internal carotid artery occlusion on noninvasive studies are followed without operation.

Conclusions

Despite current controversies about the role of carotid endarterectomy in treating the stroke-prone patient, a systematic evaluation of such patients should lead a physician to a judicious plan of management. A careful history is necessary to appropriately classify the patient as symptomatic, atypically symptomatic or asymptomatic. Such clas-

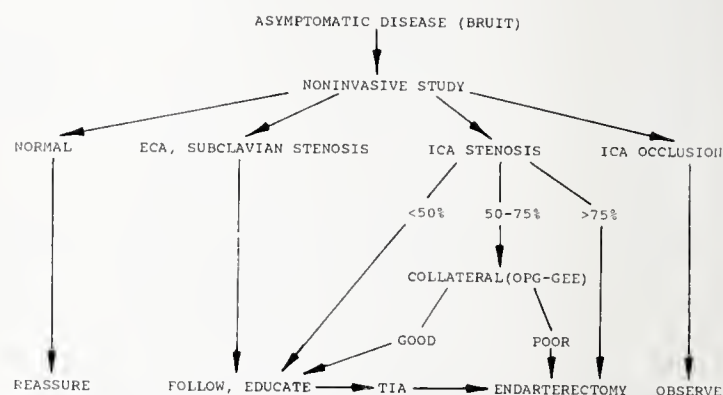


Figure 3. Algorithm for the management of the patient with suspected asymptomatic carotid disease or bruit.

sification influences the choice of diagnostic interventions and subsequent therapy. Noninvasive techniques are useful to detect and characterize extracranial carotid lesions. In addition, such noninvasive tests are invaluable for aiding the selection of the most appropriate technique of angiographic investigation, if the patient is considered a potential candidate for operation. The options of intravenous or intra-arterial digital subtraction angiography may be most intelligently selected on the basis of the results of the vascular laboratories' studies. Finally, I have presented algorithms which aid the physician in selecting the most appropriate managements of patients with symptomatic, atypically symptomatic, or asymptomatic carotid disease. These principles may facilitate the appropriate selection of those patients who are the most appropriate candidates for carotid endarterectomy while avoiding unnecessary surgical intervention on individuals who are at the least risk of stroke.

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ELECTROCARDIOGRAM OF THE MONTH

Tom Gray, O. D.
John W. Watson, M.D.
UAMS - LRVA Division of Cardiology
Little Rock, Arkansas

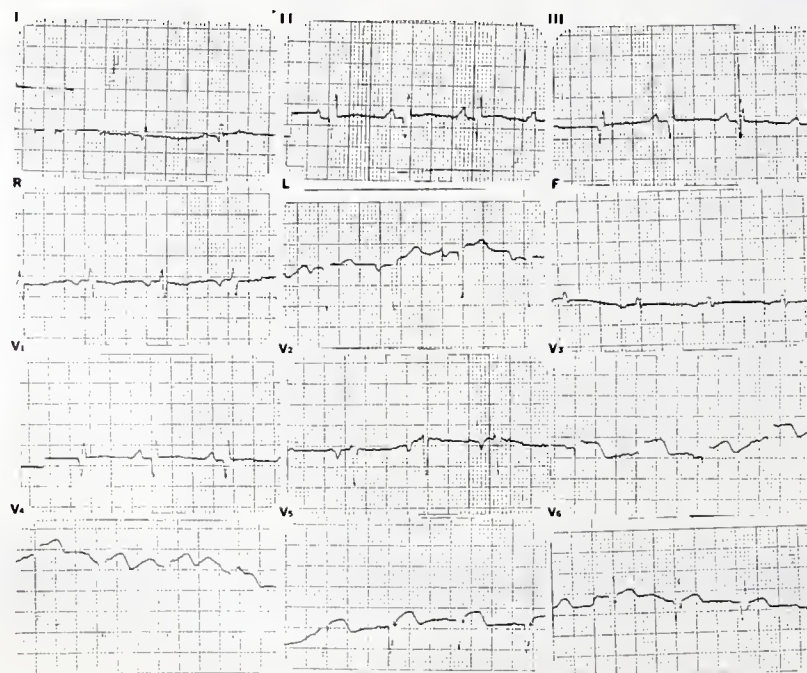
CLINICAL HISTORY:

E. K. is a 72-year-old lady who has presented for evaluation of nocturnal dyspnea and edema. She gives a past history of having had two infarcts of the myocardium, the last one six months previously. Her examination reveals an area of paradoxical precordial motion, crackles in her lungs, and an S_3 gallop. What do you think of her ECG?

DISCUSSION:

The mechanism is sinus. Q-waves are rampant on the trace and involve the inferior, lateral, and anterior myocardial walls. ST elevation is present in V_3 - V_6 . Thus, her physical examination and the ECG suggest the possibility of ventricular aneurysm. Other possibilities certainly exist to explain her heart failure. In summary, the trace is compatible with past multiple infarctions of the myocardium and hints at the presence of ventricular aneurysm.

The editor wishes to thank Dr. Gray of Conway, Arkansas for his assistance to this month's feature.



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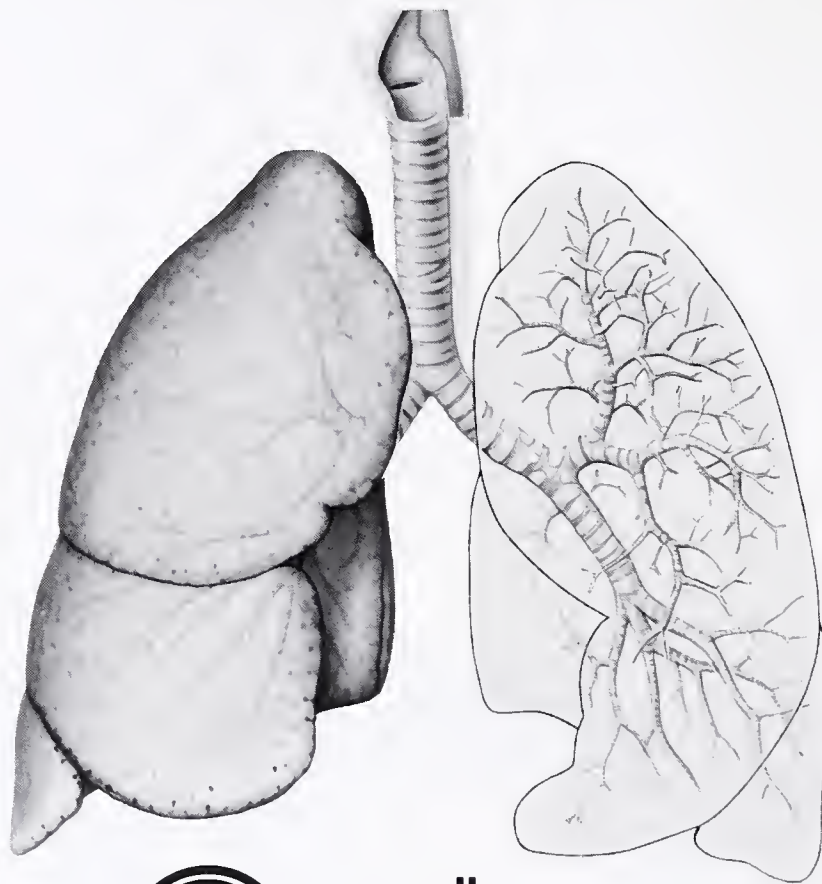
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Administer cautiously to allergic patients. Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:

- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:

- Gastrointestinal (mostly diarrhea): 2.5%.
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] or the above skin manifestations accompanied by arthritis/arthritis and, frequently, fever): 1.5%; usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness,

insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.

- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%; and, rarely, thrombocytopenia.

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Helping the Profoundly Deaf to Hear

H. A. Ted Bailey, Jr., M.D. *, James J. Pappas, M.D.,
John R. E. Dickins, M.D., and Sharon S. Graham, M.A.

Introduction

In 1982, we presented a paper in *The Journal of the Arkansas Medical Society*¹ reporting our early results with the use of a single channel cochlear implant in totally deaf patients. This early device utilized one active and one ground electrode implanted in the cochlea, and was activated by an external amplifier-modulator which delivered a simple electrical signal to the implanted electrodes. With this single channel device, we were able to offer totally deaf patients some limited hearing for environmental sounds such as car motors, ringing telephones, or footsteps. Utilizing only one active electrode precluded the deliverance of any sophisticated frequency (pitch) information and thus did not allow true discrimination of the phonetic sounds which make up speech. The early experiences and information that were gleaned by investigators with the single channel devices have led to significant improvements.

At this time, we are utilizing a twenty-two electrode multi-channel cochlear implant. With this multi-channel device some patients who are profoundly deaf are able to have interactive conversation without the use of lipreading and limited use of the telephone. This breakthrough is based on the use of a microcomputer-processor with a codable chip, programmed individually for each patient. Four patients have been implanted with the multi-channel device and seven were previously implanted with a single channel device for a total of eleven implant patients.

International Cochlear Implant Status

Tremendous interest has been demonstrated in the western world in cochlear implant research during the last five years. Several different theories and electrical strategies are currently being tried. In the United States, a number of research centers have their own electrical designs being

utilized in research devices for patients in those centers. In these instances, the devices are not ready for public distribution. Such centers include the University of California at San Francisco, Stanford University in Palo Alto, California, and Symbion Company, Inc., the company which produced the JARVIK artificial heart. In addition, the 3M Company is investigating an experimental device from Europe for marketing in the United States. All of these experimental devices have some basic components in common, but also have variations in the design of the electrical circuit and microprocessor to take advantage of different theorems concerning how best to transmit the features of speech so that they will be intelligible. In addition to the experimental devices available in the United States, there are also a number of devices in western Europe. These include devices from England, Paris and Bordeaux, France, Switzerland, and West Germany. Australia also has a very active research program in cochlear implants.

There are two devices in the United States which are approved by the FDA. This means they no longer have any experimental designation for adult patients. These two devices are the 3M House single channel device and the Nucleus Cochlear 22 channel device. Although these two devices are approved for use in adults, they are still under experimental control by the FDA for children.

Cochlear Implant Components

The Nucleus Cochlear multi-channel prosthesis, which we are currently using, consists of a three-part system including the implanted electrodes, a wearable speech microcomputer-processor and a microphone headset. The microphone installed in the headset converts incoming sounds to electrical signals which are then processed by the external microcomputer-processor, digitalized and returned to an induction antenna on the headset. This encoded electrical information is then transmitted via the antenna in the headset to the implanted electrodes (Figure 1).

*The Ear & Nose Throat Clinic, P.A., 1200 Medical Towers,
9601 Lile Drive, Little Rock, Arkansas 72205

The actual implanted portion of the system consists of a titanium receiver module which is completely encased in silicone and which contains a custom integrated circuit chip capable of delivering biphasic stimulus current pulses of various amplitudes and durations to selected electrodes attached to the receiver. The electrode array has twenty-two bands of platinum spaced over 17 mm tapering from .6 mm to .4 mm. Each electrode band has a teflon insulated platinum-iridium wire attached. The twenty-two electrode bundle is jacketed within a silicone flexible cable.

The system, working in synchrony, delivers biphasic stimulus current pulses between any pair of electrodes. Each of the twenty-two electrodes are individually programmed for stimulation. Stimulus current can be controlled in the range from twenty-five microamps to 1.5 milliamps in 2.5% steps. The direction of stimulus current is controlled in the range of ten microseconds to 400 microseconds. All variable stimulus parameters are controlled externally by means of the dedicated microcomputer-processor. The Nucleus Cochlear device is a feature extracting device. The microcomputer identifies what are considered to be some of the most important aspects of the speech signal, codes those aspects into digital information within the computer and then transmits that information to the implanted electrodes. The maximum rate of stimulation is in excess of 1,000 pulses per second. The basic frequency of voice is coded as the pulse rate, while the second formant, which is an important band width for identifying phonetic sounds, is coded as selection of electrodes to be stimulated. The amplitude or volume of sound is coded as current intensity.

The sophisticated microcomputer processing system is controlled and programmed by a dedicated desk computer system which interfaces with the patient's wearable microcomputer processor. The computer formulates and then encodes a specific program for sound for each individual patient (Figure 2). Each patient's program is based on their own electrical thresholds for perception of sound across twenty-two variations in frequency.

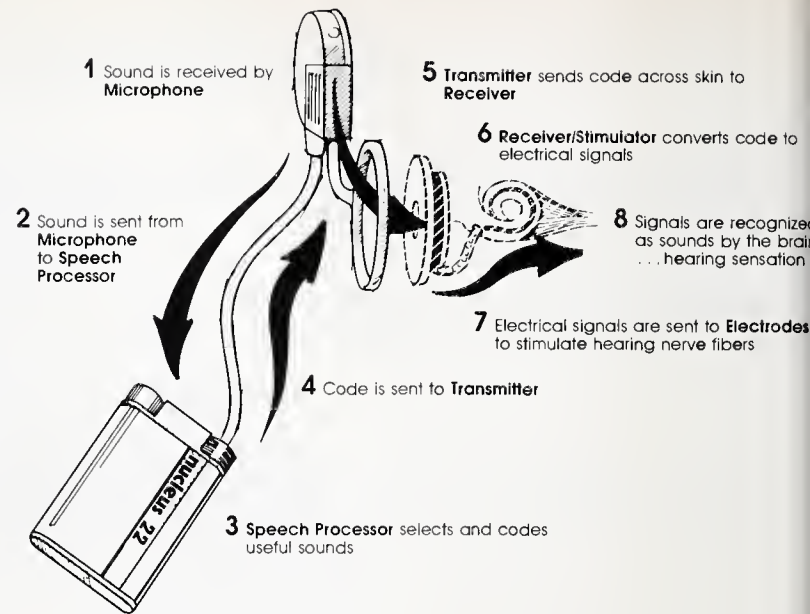


Figure 1. How the device produces hearing sensation step-by-step.

Appropriate Patient Selection

The cochlear implant can offer significant benefits to some persons who are profoundly deaf bilaterally. Deafness should exceed ninety decibels at all measured frequencies. In addition there should be no measurable speech discrimination or understanding either with or without amplification. Persons with severe to profound hearing losses who show some ability to understand speech with conventional hearing aids are not considered implant candidates. Profoundly deaf persons must have had some experience with normal or near normal sound perception earlier in life. Most adult congenitally deaf persons, or persons who were deafened in the first two years of life, have not been shown to benefit (as far as understanding speech) from cochlear implants to date. Research continues to suggest that in the congenitally deaf, central pathways between the cochlea and the auditory cortex may not be capable of transmitting and decoding meaningful speech information.

There are separate studies going on in our office and across the United States at present for implantation of children. The ideal child for a cochlear implant is one who has been profoundly deafened after the acquisition of speech and language and after considerable exposure to normal audition. An example of this would be a five-year-old child who had meningitis and subsequently became profoundly deaf. While there have been some children implanted who are congenitally deaf or who were deafened in the first year of life, the results of implantation on eventual speech and language development are still unknown at present.

Surgical Procedure

Surgical implantation consists of a mastoidectomy with insertion of the received and attached electrode array. Three to four hours of general anesthesia are required; thus the patient's general medical condition must be such that

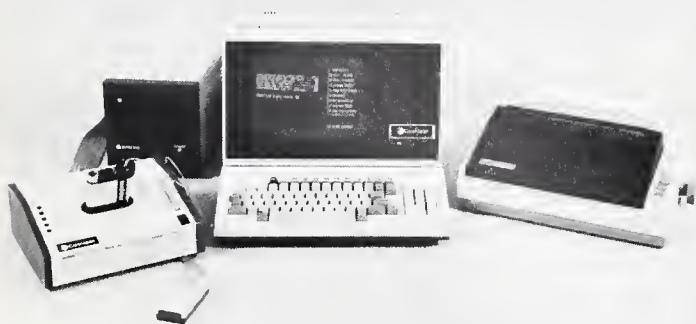


Figure 2. A computer program is formulated and encoded into each patient's wearable processor. The program may be changed as new developments occur.

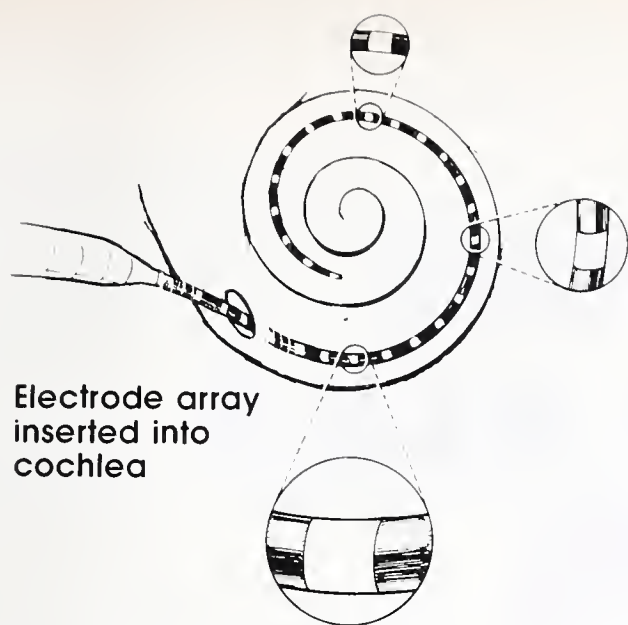


Figure 3. Electrode array inserted into cochlea.

he/she can safely withstand this length of anesthesia. A larger postauricular flap is incised and raised. A mastoidectomy is then performed which includes special bone work to develop a facial recess opening through the posterior portion of the bony ear canal into the middle ear space. Once the mastoidectomy is completed, a circular depression is made two to three millimeters deep in the squamous portion of the temporal bone, just posterior and superior to the opening into the mastoid area. This depression in the bone is used to seat the receiver. Once the receiver is in place, the flexible electrode array is guided into an opening made antero-inferiorly in the round window membrane. Using direct visualization with the operating microscope, the electrode array is then inserted into the cochlea with an optimal insertion of twenty millimeters (Figure 3). Loose areolar tissue is then used to pack around the opening made in the round window membrane. The postauricular incision is then closed. Postoperative care and recovery is essentially the same as that associated with a mastoidectomy, requiring one or two days of postoperative hospitalization.

Rehabilitation and Results

At approximately six weeks postoperative, the patient has enough reduced skin swelling so that he/she is able to be fitted with the external portions of the device. Creating the program for each patient's wearable microcomputer is a lengthy and involved process in which many tests are performed. The desk computer is used to generate a

program for the patient based on psychophysical test results, including thresholds for electrical stimulation, place pitch ranking of the electrodes, pulse rate difference limens and loudness scaling of amplitude. These results are then programmed into the wearable speech microcomputer-processor.

What do these patients hear? All of our patients have used the similar description of a "cartoon character" voice. This "Mickey Mouse" voice has all of the phonetic characteristics of speech with which we are familiar. This enables them to identify many words using hearing alone without additional lipreading. Such discrimination allows some patients to receive enough information over a telephone to permit limited conversations with familiar persons or with persons who have easily understandable speech. These patients, who preoperatively had a ninety decibel or worse thresholds, show thresholds in the twenty-five to thirty-five decibel range from 250 Hertz through 3000 Hertz. Speech tracking, which is a method of measuring conversational speech speed, has a normal rate for southern United States speakers of eighty to ninety words per minute. In the profoundly deaf person, speech tracking is usually measured from ten to twenty words per minute maximum. Postoperatively, using the multi-channel cochlear implant device, implant patients perform at sixty to seventy words per minute. Thus, when lipreading is combined with the information from the cochlear implant, communication skills improve dramatically.

Summary

The multi-channel cochlear implant offers a tremendous opportunity for the profoundly impaired patient who has had a hearing loss in the past. With the earlier single channel implant, patients were only able to receive some awareness of environmental sounds with no speech understanding. With the sophisticated and computerized multi-channel devices, patients show varying degrees of speech discrimination. For patients who are unable to distinguish speech with the use of conventional hearing aids, the multi-channel cochlear implant offers the chance for greatly improved communication with those around them. The total isolation brought on by profound deafness with its psychological, sociological and economic ramifications can be greatly lessened by this device which combines the medical, engineering, and rehabilitative sciences.

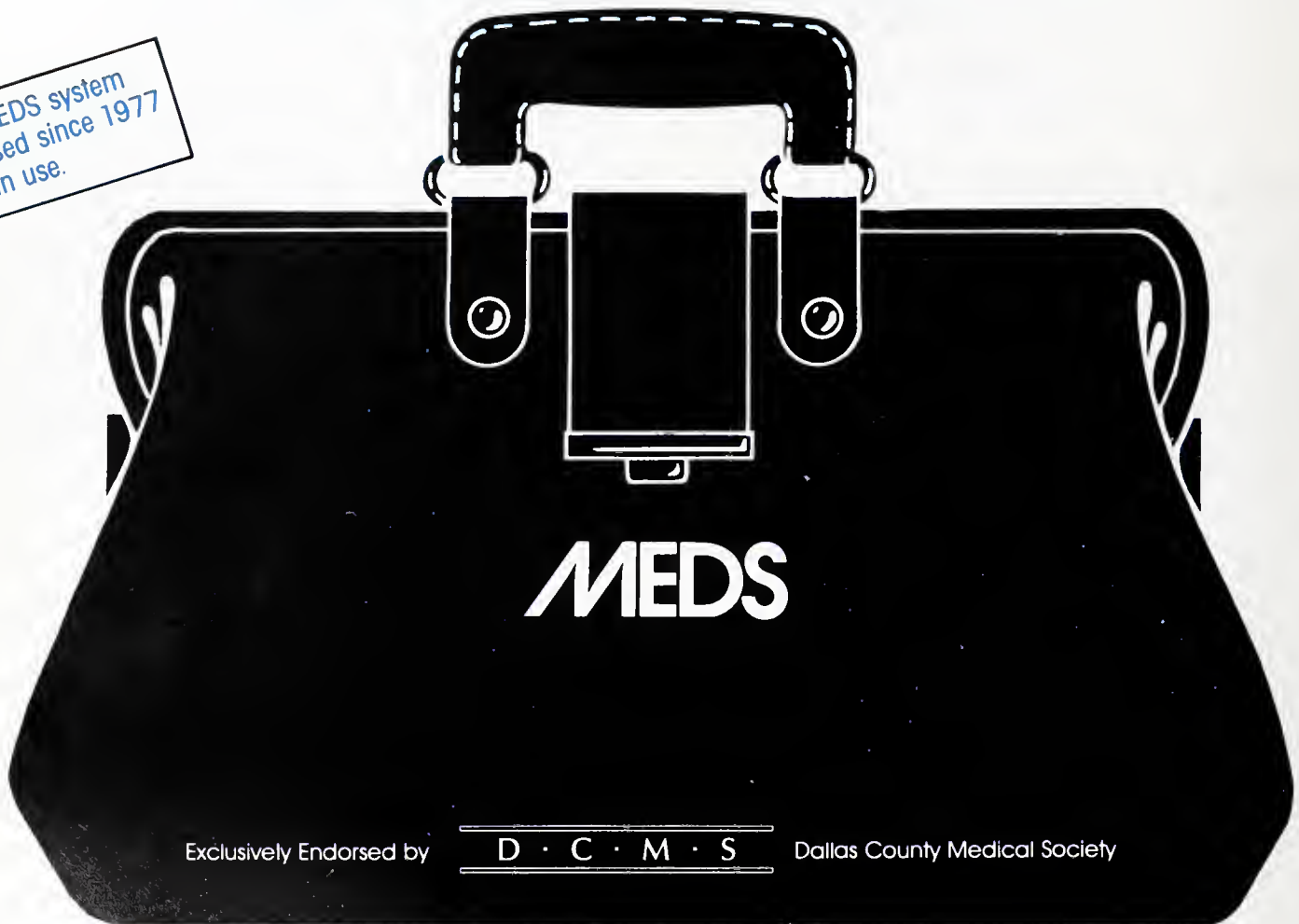
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Adenocarcinoma of the Stomach

Emilio Tirado, M.D. *, Carlos Araoz, M.D.,
Lawrence A. Mendelsohn, M.D., and Terrence A. Oddson, M.D.

Introduction

Adenocarcinoma of the stomach is the seventh cause of cancer mortality in the United States. It accounts for approximately 15,000 deaths per year. Only four to seven percent of all carcinomas of the stomach in this country are found at an early stage, in comparison to almost fifty percent in Japan.¹ This difference has a profound effect on the respective five-year survival rates. Although no improvement in survival rates can be reported in this paper, some important aspects of the disease which bear emphasis will be discussed. Two case histories are presented. One is representative of this disease as it usually presents in an advanced stage while the second case is atypical; it was an early presentation, and there was no improvement in survival although early stage lesion was discovered.

Case Report #1

A 58-year-old man presented with a six-month history of vague abdominal discomfort, dysphasia, and bloating. These symptoms were initially relieved by antacids and diet, but before admission the patient had developed lower chest discomfort, nausea, and occasional vomiting. The patient reported an eighteen pound weight loss over the last three months. Endoscopy revealed adenocarcinoma at the esophago-gastric junction. Preoperative computed tomography (CT) of the abdomen was unremarkable. Patient underwent a total gastrectomy, omentectomy, splenectomy and removal of the gastrohepatic omentum and surrounding lymph nodes. Patient had grossly involved nodes. Pathology revealed this to be an adenocarcinoma, extending through the entire thickness of the stomach and into the perigastric fat, with positive perigastric lymph nodes (stage III). Patient was reconstructed with Roux-en-Y esophagojejunostomy and a jujunojejunostomy.

Postoperatively the patient initially did well, his weight stabilized, and he was able to return to work for approximately a year and a half. He subsequently developed signs of esophageal stenosis, and endoscopy ultimately revealed this to be secondary to a tumor.

The patient underwent radiotherapy with some alleviation of his symptoms, and chemotherapy was started. He expired approximately two years after his initial surgery.

Case Report #2

A 64-year-old man presented with vague abdominal discomfort thought to be secondary to a known colonic polyp. Ten years earlier the patient had a partial gastric resection for peptic ulcer disease.

The patient underwent colonoscopy and polypectomy for a benign adenomatous polyp. Upper endoscopy was done on the basis of his having had a previous gastric resection and the suspected increased incidence of malignancy in these patients. At the time of upper endoscopy, a small superficially eroding lesion was found at the gastroduodenal anastomosis, which grossly appeared to be benign. Biopsies proved this to be adenocarcinoma. Preoperative studies included CT scans and liver scans; all were normal. The patient underwent exploratory laparotomy, at which time no gross evidence of disease was visible. Because of his previous partial hemigastrectomy, subtotal gastric resection was not feasible. The patient underwent total gastrectomy, omentectomy, radical lymph node dissection, resection of the lesser omentum, and Roux-en-Y esophagojejunostomy. Pathology report revealed this to be an early malignancy (stage 1A). However, within five months of his original surgery, patient was re-admitted with ascites

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Little Rock, Arkansas 72205

a diffuse metastatic disease in his liver. A short course of chemotherapy was given, but the patient expired. Ordinarily, this patient would have been expected to do well with such an early lesion.

Incidence and Staging

Although one often hears of the decreasing incidence of gastric cancer, this has been so only in western countries, and only in whites.² The incidence of adenocarcinoma has remained unchanged in the East, specifically China and Japan. In 1937 the incidence in the United States was thirty-seven and nineteen per 100,000 population among men and women respectively; in 1973 it was fourteen and six per 100,000 population.² This decrease is shown only in white men and women.

In the United States adenocarcinoma of the stomach accounts for 4.5% of all cancer deaths in white men, whereas in China this disease accounts for twenty-six percent of all cancer-related deaths in men. Japan has the highest mortality rate secondary to this disease in the world.² However, the incidence pattern and survival rates are so different from that in the United States that some researchers have been led to believe that there were two separate diseases involved.

However, a 1984 study by Carter and associates showed that if staged appropriately, the survival rates were similar.¹ Although early adenocarcinoma (tumor confined to the mucosa or submucosa) represents only four to seven percent of presenting lesions in this country and up to fifty percent in Japan, the five-year survival rates are comparable at this stage.¹ The overall survival rate for adenocarcinoma of the stomach in this country is six to eight percent and in Japan between thirty-five and fifty percent. Stage 1A lesions have been reported to have up to a ninety percent five-year survival, which compares favorably with the experience in Japan of ninety-four to ninety-six percent five-year survival. However, survival in stage 1B tumor (invading the submucosa and muscularis mucosa but not extending through the serosa) have a survival of less than thirty percent.³

The Japanese experience shows what can be achieved in this disease if diagnosed early. They have developed an extensive, aggressive screening of their population to include both routine double-contrast radiography and upper endoscopy. Such a massive screening effort is just not practical or cost-effective in this country.

Another reason for late presentation is the subtle early manifestation of this disease. Vague abdominal discomfort, heartburn, and gas are typical early symptoms of adenocarcinoma of the stomach. Patients often try over-

the-counter medications which frequently give temporary relief from these symptoms.

Perioperative Mortality

The late presentation of many of these patients accounts for the relatively high surgical mortality rate even for palliative resections. Perioperative mortality rates of ten to fifteen percent, which are frequently quoted in the literature for palliative gastric resections, seem high when compared to extensive operative procedures as aortic aneurysmal surgery, where perioperative mortality rates of less than four percent are frequently quoted. However, the majority of these cancer patients are frequently debilitated; their immune system has been compromised, and they become susceptible to bacterial infections. In addition, the decreased acid content of the stomach found in most of these patients allows bacterial overgrowth. Finally, the blood and debris in the stomach lumen secondary to these tumors make an excellent media for further bacterial growth. Bacterial counts of less than ten organisms per cc of gastric fluid are found in normal stomachs. However, bacterial counts dramatically climb to 10^4 organisms in gastric ulcer patients and 10^7 organisms in stomach cancer patients. This results in wound infection rates of fifty-six percent in those patients operated on without perioperative antibiotics.³

Premalignant Conditions

Some conditions are considered to be premalignant, and these need emphasis. There is a fairly uniform consensus that pernicious anemia is associated with a significant increased risk of developing gastric cancer. Figures of five to ten percent risk of developing gastric cancer in association with pernicious anemia are frequently found in the literature. Gastric cancer is reportedly twenty times more common in patients with pernicious anemia than in age-matched control population.⁴

A strong association between gastric polyps and eventual gastric cancer exists. Nearly twenty-five percent of gastric polyps over 2cm will turn out to be malignant when biopsied.³

There is a growing feeling that the incidence of gastric cancer has increased in patients who have undergone previous gastric resection for peptic ulcer disease.⁵⁻⁷ In one recent article the average time interval for the development of the gastric stump carcinoma was 17.5 years. The average survival after diagnosis was 4.6 months, making the prognosis uniformly poor, probably due to the late diagnosis.⁶ In a more recent study the authors reviewed a group of 233 patients who had previously undergone partial gastrectomy for benign disease.⁷ They found a significant number of gastric stump carcinomas and concluded that routine gas-

troscopy leads to earlier detection and higher resectability rate. They recommended yearly screening be performed starting ten years following gastric resection.

Changing Patterns

A fairly recent shift in location of gastric cancer from the antrum to the proximal stomach has been observed.⁸ The number of proximal gastric cancers increased from twenty-one to forty-four percent, with an accompanying decrease in antral carcinoma from sixty to thirty-three percent with a p value of less than .01. The shift towards more proximal tumors may make it increasingly difficult to avoid total gastrectomy in the future.

Pathology

Of all the classifications of gastric carcinoma, the concepts submitted by Lauren will be the only one discussed.⁹ They seem to incorporate those features which separate tumors by the morphologic, biologic course, and difficulty of diagnosis characteristics. Lauren discussed two types: the intestinal, which represents approximately fifty-three percent of all carcinomas, and the diffuse, which represents approximately thirty-three percent. The rest of adenocarcinomas were heterogenous in composition. The two types have similar cellular type but different growth patterns. The intestinal type tumors are usually exophytic and sometimes ulcerated. They are easier for the radiologist and endoscopist to diagnose than the diffuse type.

The diffuse type of gastric carcinoma was subdivided by Kodama into the free-cell and small-nest subtypes.¹⁰ Lymphogenous spread was more frequently noted in the small-nest subtype. Diffuse carcinomas rarely have associated intestinal metaplasia of the neighboring mucosa.

The infiltration of the muscular layers of the stomach by the diffuse type of carcinoma often is surprisingly extensive. This makes the utilization of frozen section evaluations of margins indispensable.

The endoscopic instruments have failed frequently to obtain representative samples. A report of endoscopic studies at the University Hospital of Tromsø, Norway, corroborates the difficulty in the endoscopic sampling of these lesions.¹¹ Fine-needle aspiration biopsies under direct gastroscopic examination or directed by CT studies are more successful than endoscopic biopsies in obtaining tumors.¹²

The early histopathologic-cytologic diagnosis of carcinoma results from close communication between endoscopists, radiologists, and pathologists. The pathologist should indicate the presence of precursor lesions or conditions frequently associated with gastric carcinoma, such as

<p>Stage I</p> <p>Intraluminal mass without thickening of the stomach wall and without evidence of local or distant extension of tumor.</p>
<p>Stage II</p> <p>Thickening of the stomach wall without evidence of metastatic disease or direct extension of tumor.</p>
<p>Stage III</p> <p>Thickening of the stomach wall with invasion of adjacent organs. Regional adenopathy may or may not be present, but without evidence of distant metastases.</p>
<p>Stage IV</p> <p>Thickening of stomach wall with evidence of metastatic disease, e.g., liver, lungs, distant nodes.</p>

Table I. Classification of gastric cancer.

chronic atrophic gastritis, intestinal metaplasia, mucosal hyperplasia, and dysplasia of gastric epithelium.^{13,14} The interdisciplinary cooperation between surgeon and pathologist is very useful for the correct staging of gastric carcinoma.

Diagnostic Radiology

Imaging techniques can have major impact on the accurate preoperative diagnosis and staging of gastric malignancy. The extensive Japanese experience has shown that cancer of the stomach limited to the mucosa or to mucosa and submucosa (early gastric cancer [EGC]) can be demonstrated, even in totally asymptomatic patients, using primary double-contrast upper gastrointestinal radiography. This examination requires optimum mucosal coating with high density barium and gaseous luminal distention.¹⁵ The double-contrast technique has contributed to the increased frequency of EGC in western countries.¹⁶ This examination requires no special equipment and can be accomplished in most radiology departments.¹⁷

Computed tomography routinely displays the GI tract in cross section and demonstrates the inner and outer surfaces of the stomach. The size, location, extension into adjacent organs and distant spread of gastric neoplasia can be determined by CT and accurate preoperative staging can be provided. The CT features allow the classification of gastric cancer as seen in Table I.

CT-guided fine needle biopsy can be performed if endoscopic biopsies of the gastric lesion have proved non-diagnostic. This is often necessary in the diffuse type of gastric carcinoma.¹² Certainly CT-directed biopsy can evaluate regional and distant metastases. Needle biopsy investigation can be safely performed in the out-patient setting.

The application of double-contrast technique and bowel hypotonia with agents such as glucagon increases accuracy and makes reliable diagnosis and staging available, even with second generation CT scan systems.

Computed tomography is expensive and requires sophisticated equipment, but the cost-effectiveness of accurate preoperative staging and gastric cancer by CT has been established.¹⁹

Surgery

Resectability and Prognosis

Numerous articles in the literature attest to the dismal prognosis of this disease with frequently less than fifty percent of patients who present being resectable and only half of these being resectable for cure.^{1,8,20,21}

In a study from Vanderbilt University School of Medicine the authors reviewed their twenty-three year clinical experience with 213 patients; ninety percent of them were able to undergo exploratory laparotomy.²⁰ In ninety-six percent of these patients, advanced gastric carcinoma was found. Grossly positive nodes were found in sixty-six percent, liver metastases in twenty-nine percent and peritoneal implants in twenty-three percent. There were only seven cases of early carcinoma (4%) and approximately one-third of the patients who underwent resection did so for cure. The perioperative mortality rate for total gastrectomy was 9.6% and subtotal gastrectomy was 16.3%. The reasons for the high perioperative mortality have already been discussed.

Total versus Subtotal Gastrectomy

Curative resection for gastric carcinoma involves either total or subtotal gastrectomy with resection of the regional perigastric lymph nodes, the lesser and greater omentum, and possible splenectomy and partial pancreatic resection if indicated.

There is ongoing controversy regarding choosing total or subtotal gastrectomy for this disease. The majority viewpoint favors subtotal gastrectomy when this can be done to include a large margin of normal tissue, especially if the lesion does not involve the cardia.

This is most frequently done for cancers in the antrum and pyloric region of the stomach and, unlike other areas of the GI tract, a minimum of 10cm is usually considered necessary for adequate margins.³ Cancers in the proximal portion of the stomach will more often require total gastrectomy for adequate margins.

Reconstruction

There are many methods of reconstruction following gastrectomy. However, some type of Roux-en-Y reconstruction is the most popular at this time. When a portion

of the stomach is still intact, most surgeons will attempt to attach this to the esophagus in the thoracic cavity.

Palliative Surgery

From fifty to sixty-six percent of all resections done for carcinoma of the stomach are done for palliative reasons.^{1,3,8,20,21} The accumulated data from Roswell Park Memorial Institute suggests that the medium survival of patients treated by palliative resection is two to three times greater than that of patients who are not resected.²²

After diagnosis of an incurable carcinoma of the stomach every patient who does not have resection will die within two years, whereas up to twenty percent who have undergone palliative resection will still be alive at the end of that time. An occasional patient treated by palliative resection will survive for five years or more.²²

Patients who have had a palliative resection are more likely to respond to chemotherapy and to maintain their nutritional status while receiving antineoplastic drugs. The most commonly recommended policy has been resection of all lesions of the distal stomach, if possible, when section of adjacent organs is not necessary and when not more than twenty-five percent of liver parenchyma is replaced by metastatic tumor. Under these circumstances the risk of resection is usually under eight percent. However, carcinoma in the proximal stomach is a more difficult problem because of the increased surgical risk of resection. If the tumor can be removed by an abdominal approach, the risk of proximal resection is balanced by the probability of an improved quality and duration of survival.

Patients with gastric carcinoma who are not candidates for the usual palliative procedures are a special problem. For those with tumors of the distal stomach, gastroenterostomy has been the traditional approach. However, these procedures often do not function well because of the bulk of the primary tumor and the rigidity of the gastric wall. A feed jejunostomy (or in the case of proximal gastric tumors, feeding gastrostomies) provides a means of nutrition and hydration but does not solve the problems of aspiration when the stomach is obstructed. The survival of these patients is short often because of aspiration pneumonia.

Patients with obstructive lesions of the cardioesophageal junction with often die from aspiration pneumonia. Suctioning the esophagus via a tube inserted either through the nose or through a cervical pharyngostomy adds little to their survival. These patients with a short life expectancy occasionally can be aided by dilating the opening through the tumor and the esophagus.

An alternative to blind dilation is the use of endoprosthesis, originally designed for use in squamous carcinoma of the esophagus. The use of endoprosthesis is a major operative procedure with a significant perioperative mortality rate. Postoperatively, these are able to take a blended diet by mouth, living the remainder of their lives outside the hospital.³

A recent promising approach to these patients consists of endoscopic YAG laser therapy used as palliation for

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DESCRIPTION. INDERAL LA is formulated to provide a sustained release of propranolol hydrochloride. INDERAL LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension, it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first-degree block, 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE. Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema) —PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY. The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOLYCEMIA. Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS. Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing T₄ and reverse T₃, and decreasing T₃.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case, this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL. Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should

be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

CLINICAL LABORATORY TESTS. Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS. Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered a calcium-channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardial contractility or atrioventricular conduction. On rare occasions, the concomitant intravenous use of a beta blocker and verapamil has resulted in serious adverse reactions, especially in patients with severe cardiomyopathy, congestive heart failure or recent myocardial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol.

Ethanol slows the rate of absorption of propranolol.

Phenytoin, phenobarbital, and rifampin accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased plasma levels of both drugs.

Antipyrine and lidocaine have reduced clearance when used concomitantly with propranolol.

Thyroxine may result in a lower than expected T₃ concentration when used concomitantly with propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY. Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY. Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS. INDERAL is excreted in human milk. Caution should be exercised when INDERAL (propranolol HCl) is administered to a nursing woman.

PEDIATRIC USE. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular. Bradycardia, congestive heart failure, intensification of AV block, hypotension, paresthesia of hands, thrombocytopenic purpura, arterial insufficiency, usually of the Raynaud type.

Central Nervous System. Light-headedness, mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia, visual disturbances, hallucinations, vivid dreams, an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics. For immediate formulations, fatigue, lethargy, and vivid dreams appear dose related.

Gastrointestinal. Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic. Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory. Bronchospasm.

Hematologic. Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune. In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous. Alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL Tablets to INDERAL LA Capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg-for-mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION — Dosage must be individualized. The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood-pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS — Dosage must be individualized. Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three- to seven-day intervals until optimal response is obtained. Although individual patients may respond at any dosage level, the average optimal dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE — Dosage must be individualized. The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximal dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS — 80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE — At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

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obstructing lesions. In a study of sixty patients who had either adenocarcinoma of the gastric cardia or squamous cell carcinoma of the esophagus, patients with adenocarcinoma of the gastric esophageal junction responded favorably to this form of therapy.²³

Postoperative Complications

The most life-threatening postoperative complications are sepsis and leakage at the esophageal gastric anastomosis; the latter having been reported in thirty percent of the patients. Reflux esophagitis and strictures are also common, although not as life-threatening.

Fifty percent or more of the patients are able to return to work after total gastrectomy. Approximately two-thirds of these patients will maintain their weight once a new plateau is reached and will become fully functional.

The first case we presented in this article is representative of this group of patients. A few permanent debilitated patients will tolerate food poorly or have severe problems with reflux esophagitis or stenosis of their anastomosis. Anemia due to iron deficiency is common, particularly when the distal duodenum and proximal jejunum have been bypassed, or if there is a lack of vitamin B-12. Stricture formation may be due either to esophagitis or recurrent tumor.

Chemotherapy

The problem with curing gastric carcinoma is not only with local but with distant recurrence as well. There have been many studies, especially by the Japanese, using intraoperative chemotherapy, preoperative chemotherapy, and postoperative chemotherapy in an attempt to prevent recurrence and treat disseminated disease.

There are principally three situations in which we see chemotherapy used in the treatment of gastric carcinoma. One is wide-spread disease (for example, where there are liver metastases). Trials are ongoing as to which drug combinations are the most effective, but at present 5-fluorouracil (5-FU), doxorubicin (Adriamycin), and mitomycin C (FAM) is still the most widely used chemotherapy regimen. The response rate in widely metastatic disease is thirty-five to fifty percent with a very low number of complete responses, probably less than ten percent.

The most recent new drug used for wide-spread disease, with the exception of a number of investigational phase II drugs, is cis-platinum, generally used with 5-FU and/or Adriamycin. Initially there was much excitement over cis-platinum as a new primary drug for disseminated disease in gastric cancer, but response rates have been similar to FAM with significantly more side effects.

Two other situations in which chemotherapy is being used in the treatment of gastric cancer are in those patients with resectable gastric cancer. Their studies demonstrate an increase in time to development of liver metastases.

In the next year or so, it should be clear from large multi-institutional studies whether adjuvant chemotherapy will be standard treatment in this country. Other questions that are to be answered concern combination chemotherapy and radiotherapy in the postoperative adjuvant setting, and studies are ongoing.

Summary

Adenocarcinoma of the stomach is the seventh ranking cause of cancer mortality in the United States, with overall survival rates of six to eight percent, a resection rate for cure of approximately thirty percent, and a survival rate of twenty percent in those resected for cure. The key for improving these figures rests in earlier diagnosis, as demonstrated by the Japanese experience with five-year survivals of ninety-four to ninety-six percent reported for stage 1A adenocarcinomas of the stomach. However, early carcinoma represents only four to seven percent of all cases in the United States. The vast majority of patients present with advanced disease, and this results in the poor five-year survival rates, and the increased morbidity and mortality of the various operative procedures. The difficulties of making early diagnosis have been discussed, as well as the increased incidence of adenocarcinoma in gastric polyps and in patients who have undergone previous gastric resection for peptic ulcer disease. DNA cell analysis and YAG laser therapy for obstructing nonresectable lesions of the stomach show some promise for the future.²⁴

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FROM OTHER YEARS

Editor's Note: Arkansas boasts of many fascinating physicians who brought medicine to our state. We would like you to help tell their stories. The *Journal* needs biographies of physicians of the past. If you are interested in submitting a biography, please contact the Journal office.

SMALL POX SPREADING IN ARKANSAS

*Journal of the Arkansas Medical Society Vol. 6, No. 8
February 1896 p. 354-355*

Smallpox, which commenced in Clay County last fall has spread to Mississippi, Crittenden, Lee, Monroe, Prairie, Pulaski and Faulkner counties, with still other localities to hear from. It has disappeared from Clay and Mississippi counties, where it afflicted a considerable number of persons, and in Pulaski where only four cases occurred. Besides the cases and deaths in Clay and Mississippi counties, which have already been mentioned in a previous issue of the JOURNAL, the latest reports show the following conditions:

Crittenden County, 24 cases, 5 deaths; Faulkner County, 27 cases, 4 deaths; Lee County, 12 cases, 3 deaths, St. Francis County, 16 cases, 6 deaths; Pulaski County, 4 cases, no deaths; Monroe County, 24 cases just reported.

THE SWEET SMELLS OF SUMMER

*Journal of the Arkansas Medical Society Vol. 6, No. 10
April 1896 p. 463*

Recently the city council of Little Rock had under consideration an ordinance providing for the removal of garbage and night soil in air-tight odorless wagons. As is generally the case when an attempt is made to require citizens to keep their premises clean it met with violent opposition and was speedily defeated. Just after the defeat of the ordinance a serenading party started out on a round of pleasure. They were out in the residence portion of the city, beyond a sewer district, and had just commenced their enchanting song when a window was heard to gently rise, and a light was dimly seen through the half closed outside shutters. The song had progressed to the chorus which is in these words -

Come where the lilies bloom

Come where sweet fragrance fills the air -

when one of Little Rock's filth disseminating garbage wagons came out of an alley in close proximity to the serenaders, then up went its foul scent and down came the window.

*From the University of Arkansas for Medical Sciences Library
History of Medicine/Archives Division.*

KEEPING UP

Estrogen Replacement

August 25, 1987, 12:00 noon. Presented by Gilbert Haas, M.D. Sponsored by AHEC - Fort Smith. Sparks Regional Medical Center, Seventh Floor Dining Room. One Category I credit hours.

Nutrition and Aging III: Malnutrition in the Elderly

September 9-10, 8:00 a.m. - 4:00 p.m. and 8:00 a.m. - 3:00 p.m. Presented by David A. Lipschitz, M.D., Ph.D. and Ronni Chernoff, Ph.D., R.D. Sponsored by UAMS Office of Continuing Education for Physicians. Excelsior

Hotel, Little Rock. Fee: \$175.00; VA employees, \$50.00. Eleven Category I credit hours.

ATLS Provider Course

September 12-13, time to be announced. Presented by Robert W. Barnes, M.D., and Charles D. Mabry, M.D. Sponsored by UAMS Education Building, Little Rock. Sixteen hours Category I credit. Fee: \$425.00.

Diabetic Seminar

September 12. Sponsored by Baptist Medical Center. BMC Shuffield Auditorium. For further information

contact: BMC Medical Education Department, (501) 227-2672.

Why Do I Keep Hurting Myself: Adolescent Alcoholism & Substance Abuse

September 15, 7:00 p.m. Presented by Vann Arthur Smith, PhD., C.A.C., Clinical Neuropsychologist, Libertyville, IL. Sponsored by Baxter County Regional Hospital, Mountain Home. Education Building, Baxter County Regional Hospital. Two hours Category I credit.

Gerontology

September 22 and 24, 12:30 p.m. Presented by Herbert T. Smith, M.D. Sponsored by AHEC - Fort Smith. Sparks Regional Medical Center. One hour Category I credit.

Osteoporosis

September 23, 12:30 p.m. Sponsored by AHEC-Fort Smith. Sparks Regional Medical Center. One hour Category I credit.

Treatment of Acute Chemical Exposure

September 26. Presented by George Wood, M.D. Sponsored by Baptist Medical Center. BMC Shuffield Auditorium. For further information contact: BMC's Medical Education Department, (501) 227-2672.

Pulling the Plug

September 29, 12:30 p.m. Presented by Russell Williams, MSW. Sponsored by AHEC Fort Smith. Sparks Regional Medical Center. One Category I credit hour.

Therapeutic Drug Classes

September 30, 12:30 p.m. Presented by Charles C. Marsh, Pharm.D. Sponsored by AHEC Fort Smith.

Sparks Regional Medical Center. One Category I credit hour.

Cancer Management Course

October 9 and 10, 7:30 a.m. - 4:30 p.m.. Presented by Nicholas P. Lang, M.D. and James H. Bledsoe, M.D. Sponsored by the American College of Surgeons and the UAMS Office of Continuing Education for Physicians. UAMS Education Building, Room 8121, Little Rock. Thirteen hours of Category I credit. Fee: \$250.

Psychiatry Update '87

October 10 and October 11, times to be announced. Presented by G. Richard Smith, M.D., and R. Bronson Stilwell, M.D. Sponsored by the UAMS Office of Continuing Education for Physicians. Fayetteville Hilton, Fayetteville. Category I credit and fees to be announced.

Helping the Post MI Patient

October 22, 12:30 p.m. Presented by Russell Williams, MSW. Sponsored by the AHEC Fort Smith. Sparks Regional Medical Center. One hour Category one credit.

Primary Care Update

October 22 and October 23. Sponsored by the Baptist Medical Center. Little Rock Hilton Inn. For further information contact: BMC's Medical Education Department, (501) 227-2672.

Hypertensive Drugs

October 28, 12:30 p.m. Presented by Charles C. Marsh, Pharm.D. Sponsored by AHEC Fort Smith. Sparks Regional Medical Center. One hour Category I credit.

Recurring Education Programs

EL DORADO - AHEC

- Behavioral Sciences Conference*, first and fourth Friday, 12:15 p.m., AHEC - South Arkansas.
- Chest Conference*, third Wednesday, 12:30 p.m., Warner Brown Hospital
- Fracture Conference*, third Tuesday, 12:15 p.m., AHEC-South Arkansas
- Gynecology-Pathology Conference*, second Friday, 12:15 p.m., AHEC-South Arkansas
- Internal Medicine Conference*, first, second and fourth Wednesday, 12:15 p.m., AHEC-South Arkansas
- Pathology Conference*, second Tuesday, 12:15 p.m., AHEC-South Arkansas
- Pharmacology Conference*, second Thursday, 12:15 p.m., AHEC-South Arkansas
- Obstetrics-Gynecology Conference*, fourth Thursday, 12:15 p.m., AHEC-South Arkansas
- Surgical Conference*, first, second and third Monday, 12:15 p.m., AHEC-South Arkansas
- Tumor Clinic*, fourth Tuesday, 12:15 p.m., AHEC-South Arkansas

FAYETTEVILLE - AHEC NORTHWEST

Medicine Teaching Conference, first, third and fifth Friday, 7:30 a.m., Baker Conference Room, Washington Regional Medical Center

FAYETTEVILLE - VA MEDICAL CENTER

Medical Conferences (varying topics), each Wednesday, 12:15 p.m., Surgical Suite, VAMC

Emergency Mortality Conference, each Friday, 12:30 p.m.,
Conference Room, Building 1, Fayetteville Medical Center
SMITH-AHEC

Cardiology, first Wednesday, 12:30 p.m., Sparks Regional Medical Center
Family Practice Conference, third Wednesday, 12:30 p.m., Sparks Regional Medical Center
Neurology Conference, second Thursday, 12:30 p.m., Sparks Regional Medical Center

HOT SPRINGS-AMI NATIONAL PARK MEDICAL CENTER

Continuing Medical Education Luncheon for Medical/Dental Staff, varying topics, second and fourth Friday, 12:30 p.m., Classrooms, AMI National Park Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, first and third Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Annex Building
Arkansas Methodist Hospital CME Conference, last Friday, 7:00 a.m., Arkansas Methodist Hospital, Paragould
Cherokee Village Tumor Conference, third Monday, 6:00 p.m., Ozark Baptist Memorial Hospital, Cherokee Village, every four months.
Chest Conference, fourth Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room
Independence County Medical Society, second Tuesday, 7:30 p.m., White River Medical Center, Batesville
Interesting Case Conference, second and fifth Tuesday, when applicable, 12:00 noon, St. Bernard's Dietary Conference Room
Kennett Tumor Conference, second Tuesday (every other month), Twin Rivers Regional Medical Center, Kennett, Mo.
Methodist Hospital of Jonesboro CME Staff Conference, second Tuesday, 7:30 p.m., Cafeteria, Methodist Hospital of Jonesboro
Monthly Medical Lecture Series, third Tuesday, 7:30 p.m., rotates each month between Walnut Ridge and Pocahontas
Newport Tumor Conference, second Wednesday, 12:00 noon, rotates each month between Harris Clinic and Newport Hospital
Perinatal Conference, second Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Piggott Tumor Conference, third Wednesday, 12:00 noon, Piggott Hospital, every four months.
Poplar Bluff Tumor Conference, third Wednesday, 12:00 noon, Lucy Lee Hospital, Poplar Bluff.
Tumor Conference, fourth Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Wynne Tumor Conference, third Monday, 6:00 p.m., Grecian Steak House, Wynne, every four months.

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Alternating Sub-Specialty Conference, third Wednesday, 12:00 noon, Second Floor Classroom
ACH Tumor Board, first Monday, 4:00 p.m., Second Floor Classroom
General Pediatrics Seminar, first and third Friday, 12:00 noon, Second Floor Classroom
Genetics Conference, each Wednesday, 12:00 noon, Sturgis Building, Room 457
Infectious Disease Conference, second Wednesday, 12:00 noon, Sturgis Building, Room 121
Oncology Conference, third Thursday, 8:00 a.m., Second Floor Classroom
Pediatric Grand Rounds, each Tuesday, 8:00 a.m., Sturgis Building, Auditorium
Pediatric Neuropsychiatry Conference, second Wednesday, 1:30 p.m., Polly R. Thomas Conference Room
Pediatric Neuroscience Conference, first Thursday, 8:00 a.m., Second Floor Classroom
Pediatric Pathology Conference, first Wednesday, 12:00 noon, Second Floor Classroom
Pediatric Pharmacology Conference, fifth Wednesday when applicable, 12:00 noon, Second Floor Classroom
Pediatric Radiology Conference, first and third Thursday, 12:00 noon, Second Floor Classroom
Pediatric Research Conference, third Monday, 12:00 noon, Second Floor Classroom
Problem Case Conference, second and fourth Friday, 12:00 noon, Second Floor Classroom
Respiratory Care Case Conference, each Monday, 3:00 p.m., Second Floor Classroom

LITTLE ROCK-ST. VINCENT INFIRMARY

Cancer Conference, first Wednesday, 12:00 noon, CARTI Auditorium. A meal is provided.
Cancer Conference, third and fourth Thursday, 12:00 noon, Room S1174K, Lab. A meal is provided.
General Medicine Journal Club, each Tuesday, 12:00 noon, Medical Affairs Conference Room. Bring your lunch.
Hematology-Oncology Conference, second Thursday, 12:00 noon, Laboratory Library. A meal is provided.
Interhospital Urology Grand Rounds, first Tuesday, 5:30 p.m., Classroom 1, Education Wing. Refreshments are provided.
Pediatric Conference, first Tuesday, 12:30 p.m., Classroom I, Education Wing. A meal is provided.
Peripheral Vascular Disease Conference, third Tuesday, 6:00 p.m., Classroom 1, Education Wing. A meal is provided.
Pulmonary Conference, second and fourth Wednesday, 12:00 noon, Classroom 1, Education Wing. A meal is provided.
Neuropathology Conference, third Tuesday, 5:00 p.m., Room S1174K, Laboratory. Refreshments are provided.

LITTLE ROCK-UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

ACRC/CARTI Tumor Conference, each Wednesday, 12:00 noon, CARTI, Markham & University
ACRC Oncology Forum, fourth Thursday, 4:00 p.m., UAMS Education Building, Room G137
Anesthesia Lecture Series, each Wednesday and Thursday, 4:00 p.m., UAMS Education Building, Room G/110 A&B
Anesthesia Morbidity and Mortality Conference, each Tuesday, 6:45 a.m. (Wednesday afternoon only during last week of the month at 4:00 p.m.), UAMS Education Building, Room G/110 A&B
Interdisciplinary Gynecologic Cancer Conference, each Friday, 12:30 p.m., UAMS Education Building, Room G106 A&B
Medicine Grand Rounds, each Thursday, 12:15 p.m., UAMS Shorey Auditorium.
Medicine Research Conference, each Tuesday, 8:00 a.m., UAMS Shorey Building Room 8/105
Neurology Clinical Case Conference, three Thursdays per month, 8:00 a.m. Rotates between UAMS (7B33) and LRVAMC (3S) and ACH.
Neuropathology Conference, every Tuesday, 4:00 p.m. Rotates between UAMS (Shorey Building, 4th floor) and LRVAMC (Autopsy Room).
Neuroscience Conference (Basic), second, third, and fourth Monday, 8:00 a.m., UAMS 7B33.
Ob/Gyn Grand Rounds, each Wednesday, 7:30 a.m., UAMS Education Building, Room G/131B
Ophthalmology Problem Case Conference, each Thursday, 4:00 p.m., UAMS AAC Eye Clinic, Room 3/150.

Orthopaedic Basic Science Conference, each Tuesday, 11:00 a.m., UAMS Education Building, Room B/135
Orthopaedic Bibliography Conference, each Tuesday, 8:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Fracture Conference, each Tuesday, 7:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Grand Rounds, each Tuesday, 10:00 a.m., UAMS Education Building, Room B/135
Psychiatry Grand Rounds, each Friday, 11:00 a.m., UAMS Shorey Auditorium
St. Vincent Urology Grand Rounds, first Tuesday, 5:30 p.m., St. Vincent Infirmary, Education Building Room 159
Surgery Grand Rounds, each Saturday, 9:00 a.m., UAMS Education Building, Room G/131
Surgical Science Conference, each Saturday, 8:00 a.m., UAMS Education Building Room G/131
Urologic Topics, once or twice monthly, 5:00 p.m., UAMS
Urology Grand Rounds, twice monthly, 5:00 p.m., VAMC
Urology Morbidity and Mortality Workshop, last Wednesday, UAMS
Uro-Radiology Workshop, first Thursday, 5:00 p.m., UAMS
VA Medical Service Teaching Conference, each Thursday, 8:00 a.m., NLRVA, Building 66, Room 38
VA Research Methods Conference, first Wednesday, 12:00 noon, VAMC, Room 1E122
VA Surgery Grand Rounds, each Thursday, 12:45 p.m., VAMC, Room 2D109
VA Topics in Rehabilitation Medicine, each Thursday, 7:45 a.m., NLRVA Conference Room, Building 89L
VA Weekly Cancer Conference (Surgical Service), each Tuesday, 1:00 p.m., VAMC, Room 2D109

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, third Thursday, 7:00 a.m., Conference Room 1
Emergency Medicine Board Review, second Thursday, 6:00 p.m., Third Floor Conference Room, Doctor's Park Building.
Grand Rounds Conference, each Wednesday, 12:00 noon, Conference Room 1. Lectures and Case Presentations. A light lunch will be served.
Pathology Conference, third Tuesday, 3:00 p.m., Pathology Library. Case Presentations.
Pulmonary Conference, each Tuesday, 12:00 noon, Shuffield Auditorium. Lunch served for \$1.75.
Surgery Conference, each Thursday, 7:30 a.m., Shuffield Auditorium. Lectures and Case Presentations.

PINE BLUFF-AHEC

Behavioral Science Conference, each Thursday, 12:30 p.m., Jefferson Regional Medical Center
Chest Conference, second and fourth Friday, 12:30 p.m., Jefferson Regional Medical Center
Family Practice Conference, fourth Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Internal Medicine Conference, second and fourth Wednesday, 12:30 p.m., Jefferson Regional Medical Center
Obstetrics/Gynecology Conference, second Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Pediatric Conference, third Wednesday, 12:30 p.m., Jefferson Regional Medical Center
Radiology Conference, third Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Southeast Arkansas Medical Lecture Series, third Tuesday, 6:30 p.m., Rosswood County Club. Dinner meeting.
Sub-Specialty Conference, first Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Surgery Conference, first Wednesday, 12:30 p.m., Jefferson Regional Medical Center

TEXARKANA-AHEC

Chest Conference, third Wednesday, 12:30 p.m., St. Michael Hospital
Tumor Conference, first Wednesday, 7:00 a.m., St. Michael Hospital

As organizations accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the organizations named certify that these continuing medical education activities meet the criteria for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

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THINGS TO COME

AUGUST 20-21

1987 Regional Perinatal Conferences. Sponsored by the Arkansas High Risk Pregnancy Program, Department of Obstetrics and Gynecology and the Office of Continuing Education, UAMS AHECs. Stroud Hall, St. Bernard's Regional Medical Center, Jonesboro, AR. Six and three-quarter hours Category I credit. Fee: \$25 for physician and \$10 for nurses and other health professionals. For further information, contact: UAMS, Arkansas High Risk Pregnancy Program, 4301 West Markham, Slot 518, Little Rock, Arkansas 72205.

AUGUST 24-26

Cardiology Update. Sponsored by the Institute for Medical Studies. San Diego, California. Application has been submitted for fifteen hours of Category I credit. For further information, contact: Lisa Krehbiel, Institute for Medical Studies, 30131 Town Center Drive, Suite 215, Laguna Niguel, CA 92677; (714) 495-4499.

SEPTEMBER 2-3

Advanced Cardiac Life Support Provider Course. Sponsored by the University of Kansas Medical Center. Student Center, Francisco Lounge, University of Kansas Medical Center. Thirteen and one-half Category I credit hours. Fees are to be announced. For further information, contact: David S. Baldwin, M.P.A., University of Kansas Medical Center, Office of Continuing Medical Education, 39th and Rainbow Blvd., Kansas City, KS 66103; (913) 588-4480.

SEPTEMBER 10-12

Advanced Doppler Echocardiography Seminar. Sponsored by the Center for Medical Ultrasound, Bowman Gray School of Medicine. Innisbrook Resort Conference Center, Tarpon Springs, Florida. Seventeen Category I credit hours. For further information, contact: Registrar, Ultrasound Center, Bowman Gray School of Medicine, 300 S. Hawthorne Road, Winston-Salem, NC 27103; (919) 748-4505.

SEPTEMBER 12-17

American Academy of Family Physicians Congress of Delegates and Scientific Assembly. Sponsored by the AAFP. San Francisco, California. Congress of Delegates will meet September 12-14. Scientific Assembly will begin September 14 and continue through September 17. For further information contact: AAFP, 1740 West 92nd Street, Kansas City, MO 64114-3246; (816) 333-9700.

SEPTEMBER 17-19

Management Challenges in Mental Health Service Delivery. Sponsored by Group Health Association of

America, Inc. Minneapolis, MN. Twelve and one-quarter hours Category I credit. Fee: Before August 24: GHAA Member, \$370; non-member, \$440. After August 24: GHAA member, \$430; non-member, \$500. Further information: Mental Health, GHAA Registrar, 1129 Twentieth Street, NW, Suite 600, Washington, D.C. 20036.

SEPTEMBER 22-25

Doppler Ultrasound: Vascular and Abdominal Applications. Sponsored by the Institute for Medical Studies. San Francisco, CA. Twenty-four hours Category I credit. Further information: Lisa Krehbiel, Institute for Medical Studies, 31031 Town Center Dr., Suite 215, Laguna Niguel, CA 92677; (714) 495-4499.

SEPTEMBER 25

Sixth Annual Doppler, 2-D, and Stress Echocardiography Symposium. Sponsored by the Institute for Medical Studies. Washington, D.C. area. Thirty-nine Category I credit hours. Further information: Lisa Krehbiel, Institute for Medical Studies, 30131 Town Center Dr., Suite 215, Laguna Niguel, CA 92677; (714) 495-4499.

SEPTEMBER 25

Nutrition Concerns for Women: A Symposium for Health Professionals. Sponsored by the University of Kansas Medical Center. Kansas City, KS. Category I credit available. For further information, contact: Eileen Buttrick, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103; (913) 588-4480.

OCTOBER 1-3

Schizophrenia and the Family: Integrating Psychoeducational and Family Therapy Approaches. October 1 and 2: Professionals workshop. October 3: Families workshop. Sponsored by the Menninger Foundation. Seeley Conference Center, Topeka, KS. Thirteen Category I credit hours. Fees: \$185. September 10 registration deadline. Advance registration required. Further information: Brenda Vink, Conference Coordinator, Division of Continuing Education, The Menninger Foundation, Box 829 Topeka, KS; (913) 273-7500, ext. 5991.

OCTOBER 14-18

American Society of Internal Medicine Annual

Meeting. Sponsored by the American Society of Internal Medicine. J. W. Marriott Hotel, Washington, D.C. Fourteen hours Category I credit. For more information and registration materials, call (800) 338-ASIM or write to ASIM, 1101 Vermont Ave., NW, Suite 500, Washington, D.C. 20005.

OCTOBER 23-24

An Overview of Geriatric Medicine and a Strategy for

Geriatric Boards . Co-sponsored by the Tennessee Geriatrics Society, American Geriatrics Society, and American Medical Directors Association. Knoxville, TN. Twelve Category I credit hours. Further information: Dr. James A. Greene or Diane Burkett, Center for Health & Creative Aging, 9330 Park West Blvd., Suite 502, Knoxville, TN 37923; (615) 694-0076.

OCTOBER 26-31

Thirty-Eighth Annual Workshops and Scientific Program of the Society for Clinical and Experimental

Hypnosis . Co-sponsored by University of California and the University of Southern California. Ambassador Garden Hotel, Los Angeles, CA. Forty-six Category I credit hours. Further information: Marion Kenn, Administrative Director, SCEH, 128A Kings Park Drive, Liverpool, NY 13090.

OCTOBER 27-31

Non-Invasive Vascular Diagnosis by Doppler

Ultrasound. Sponsored by the Institute for Medical Studies. Houston, Texas. Up to thirty hours Category I credit. Further information: Lisa Krehbiel, Institute for Medical Studies, 30131 Town Center Dr., Suite 215, Laguna Niguel, CA 92677, (714) 495-4499.

NEWSMAKERS

Two Arkansas Medical Society members have been elected to the Arkansas Thoracic Society. **Dr. Owen Clopton** of Jonesboro was elected vice president. He is an internist. **Dr. David Nichols**, a Fort Smith internist and pulmonary disease specialist, was elected president-elect. Other officers are Dr. David Nicholson of Little Rock, president; and **Dr. James Phillips**, secretary/treasurer. Dr. Phillips is also a pulmonary disease specialist. The Thoracic Society is the medical branch of the American Lung Association of Arkansas.

Arkansas Children's Hospital new Chief of Staff is **Betty Lowe, M.D.**, Dr. Lowe was the medical director for eleven year at ACH hospital prior to accepting the position of chief of staff. Dr. Lowe will serve for one year in that capacity.

The Arkansas Genetics Program has received a \$4,560 grant from the Arkansas Chapter of the March of Dimes Birth Defects Foundation. **Dr. J. Gerald Quirk**, associate professor of Obstetrics and Gynecology will be a co-director of the grant. The grant will establish a statewide phone-in service for health care providers, enabling them to obtain information about chemical, infectious, and physical exposures during pregnancy.

William Sherrill, Jr., M.D., a Fort Smith orthopedic surgeon, has been elected 1987-88 vice-president of the Mid-Central States Orthopedic Society. Dr. Sherrill is the chief of orthopedics for Sparks Regional Medical Center and is on staff at St. Edward Mercy Medical Center and Fort Smith Rehabilitation Hospital.

A childhood asthma program was held recently to provide information and answer parents' questions about asthma, the warning signs of an attack, medication and relaxation techniques. **Dr. Kingsley Bost**, a pediatrician and **Andrew Monfee, M.D.**, a family practitioner, were among those on the panel. Both physicians practice in Russellville. The program was co-sponsored by St. Mary's and the American Lung Association of Arkansas.

Dr. David Sward recently gave Bill Anderson his "just dessert." Being high bidder at a pie auction fund-raiser gave Dr. Sward, a Mountain Home orthopedist, the opportunity to put a "pie in the eye" of the Baxter County Regional Hospital Director's face. The money will be used to send the hospital's EMTs to a two-week course in Little Rock for certification as paramedics.

It's hard enough to see one doctor retire in a small town but Huntsville is losing two. **Dr. Ivan Box** and **Dr. Austin Smith** have both retired this summer. The family practitioners have been together in practice since 1960. Dr. Smith opened his doors in Huntsville in 1954 and Dr. Box joined him six years later.

Dr. Carlton Lee Chambers, a Harrison otolaryngologist, has been named a Fellow of the American Academy of Facial Plastic and Reconstructive Surgery.

President Reagan recently presented the "Pride in America" award to **Dr. Hampton Roy**, a Little Rock ophthalmologist. Dr. Roy received the award for his work in the Arkansas Blooms Program which encourages the people of Arkansas to plant wildflowers along Arkansas roadsides.

NEW MEMBERS

ARKANSAS COUNTY MEDICAL SOCIETY

HARSH, KAREN L., General Practice, Hot Springs Village. Born June 20, 1952, Moses Lake, WA. Pre-medical education, Grand Valley State College, Allendale, MI, B.S., 1975. Medical education, Oklahoma College of Osteopathic Medicine and Surgery, 1983. Internship, Dallas-Fort Worth Medical Center, Grand Prairie, TX. Practice experience, one and one-half years. Board eligible. Member, American College of General Practice, ACGP, and Texas Osteopathic Association. Dual membership with Garland County Medical Society.

McDANIEL, CRAIG A., Family Practice, Jonesboro. Born November 24, 1954, Paragould. Pre-medical education, Harding University, B.S., 1977. Medical education, University of Arkansas for Medical Sciences, 1981. Residency, AHEC Northeast-Jonesboro. Practice experience, three and one-half years. Board certified. Member, AAFP. Dual membership with Craighead County Medical Society.

INDEPENDENCE COUNTY MEDICAL SOCIETY

DAVIDSON, DENNIS O., Family Practice, Batesville. Born October 30, 1945, Beebe, AR. Pre-medical education, Hendrix College, B.A., 1966. Medical education, University of Arkansas for Medical Sciences, 1971. Internship, Medical Center, Columbus, GA. Practice experience, four years, Conway, AR; two years, Stephens, AR; and nine years, Batesville. Board certified. Member, AAFP.

MILLER COUNTY MEDICAL SOCIETY

EICHLER, EDWARD A., JR., Internal Medicine, Texarkana. Born March 3, 1955, Houston, TX. Pre-medical education, University of Texas at Austin, B.A., 1977. Medical education, University of Texas Medical School, Houston, 1981. Internship and Residency, University of Texas Medical Branch Hospitals, Galveston. Practice experience, five years (including internship, residency and fellowship). Board certified. Member, AMA.

GILLEAN, JOHN A., Internal Medicine, Texarkana. Born January 30, 1952, DeQueen, AR. Pre-medical education, Hendrix College, Conway, AR, B.A., 1973.

Medical education, University of Arkansas for Medical Sciences, 1977. Internship, Tulane Division of Charity Hospitals, New Orleans. Residency, UAMS. Practice experience, four and one-half years, Ashdown, AR. Teaching appointments, Asst. Clinical Professor, AHEC Southwest-Texarkana. Board certified.

PULASKI COUNTY MEDICAL SOCIETY

CURTNER, BYRON D., Family Practice, North Little Rock. Born November 16, 1957, Wynne, AR. Pre-medical education, Hendrix College, Conway, B.A., 1980. Medical education, UAMS, 1984. Internship and Residency, UAMS.

FRAZIER, GEORGE T., JR., Orthopedic Surgery, Little Rock. Born March 9, 1954, Austin, TX. Pre-medical education, Hendrix College, Conway, B.A., 1976. Medical education, UAMS, 1982. Internship and Residency, UAMS. Board eligible.

PETERSON, MARK A., Family Practice, Little Rock. Born January 8, 1958, Little Rock. Pre-medical education, UALR, B.S., 1980. Medical education, UAMS, 1984. Internship and Residency, UAMS. Board eligible.

SEBASTIAN COUNTY MEDICAL SOCIETY

DROLSHAGEN, LEO F., Radiology, Fort Smith. Born June 9, 1956, Detroit, MI. Pre-medical education, University of Detroit, B.A., 1977. Medical education Wayne State University, 1981. Residency, Henry Ford Hospital, Detroit. First year of practice. Board certified. Member, RSNA.

RESIDENTS

BELL, TIMOTHY, J. Born June 20, 1956, Helena, AR. Pre-medical education UALR, B.S., 1979. Residency field of study, Ob/Gyn. Member, MOAPS, AOA, ACOOG, ACGP.

MAY, THOMAS C. Born March 13, 1956, Memphis, TN. Pre-medical education, Southwestern University, Memphis. Residency field of study, Geriatric Medicine.

STANTON, T. MICHAEL. Born July 16, 1955, Conway, AR. Pre-medical education, University of Arkansas, Fayetteville/University of Central Arkansas, B.S., 1977. Residency field of study, General Surgery.

IN MEMORIAM

DR. ROBERT F. McCRARY, SR.

Dr. Robert F. McCrary, Sr., a Hot Springs obstetrician and gynecologist, died Wednesday, July 15, 1987. He was 66.

Dr. McCrary was the former chief of staff and board member of St. Joseph Regional Health Center and a past president of the Garland County Medical Society. He was a member of the American Medical Society as well as the Arkansas Medical Society.

A lifelong resident of Hot Springs, Dr. McCrary was a former member of the Hot Springs school board. He was also a diplomate of the American Board of Obstetrics and Gynecology.

Dr. McCrary is survived by his wife, Nancy M. McCrary; five sons, William D. McCrary and Michael S. McCrary, both of Little Rock; Robert F. McCrary, Jr., of Hot Springs; Richard B. McCrary of Gulfport, MS; John T. McCrary of Dallas; two daughters, Mary E. Grey of

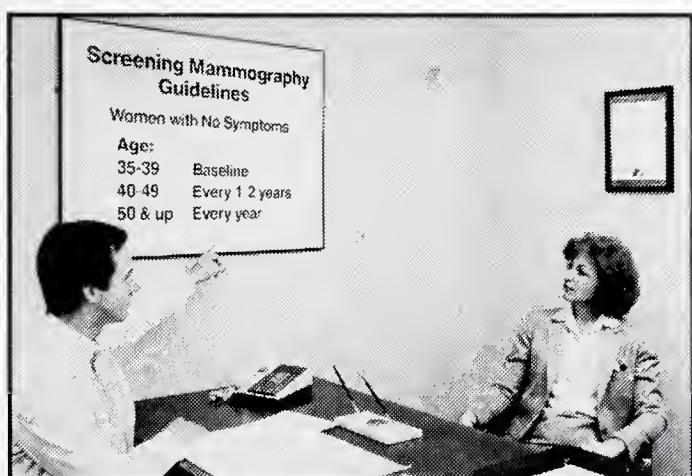
Austin TX, and Lee Ann Conley of San Antonio; a sister Mildred Cazort of Hot Springs, and fourteen grandchildren.

DR. KAY M. KRETH

Kay M. Kreth, M.D., a Little Rock obstetrician and gynecologist, died Tuesday, July 28, 1987. He was 61.

Dr. Kreth had begun his practice in 1955 after attending the University of Arkansas for Medical Sciences. He was currently serving as the chief of staff of gynecology at St. Vincent Infirmary. Dr. Kreth was a member of the Pulaski County and Arkansas Medical Societies as well as a Fellow of the American College of Obstetrics and Gynecology.

Survivors are his wife, Jeanne West Kreth; four sons, Timothy K. Kreth of Memphis, Paul G. Kreth of Oklahoma City, John M. Kreth and Richard J. Kreth, both of Little Rock; and a daughter, Julianne J. Kreth.



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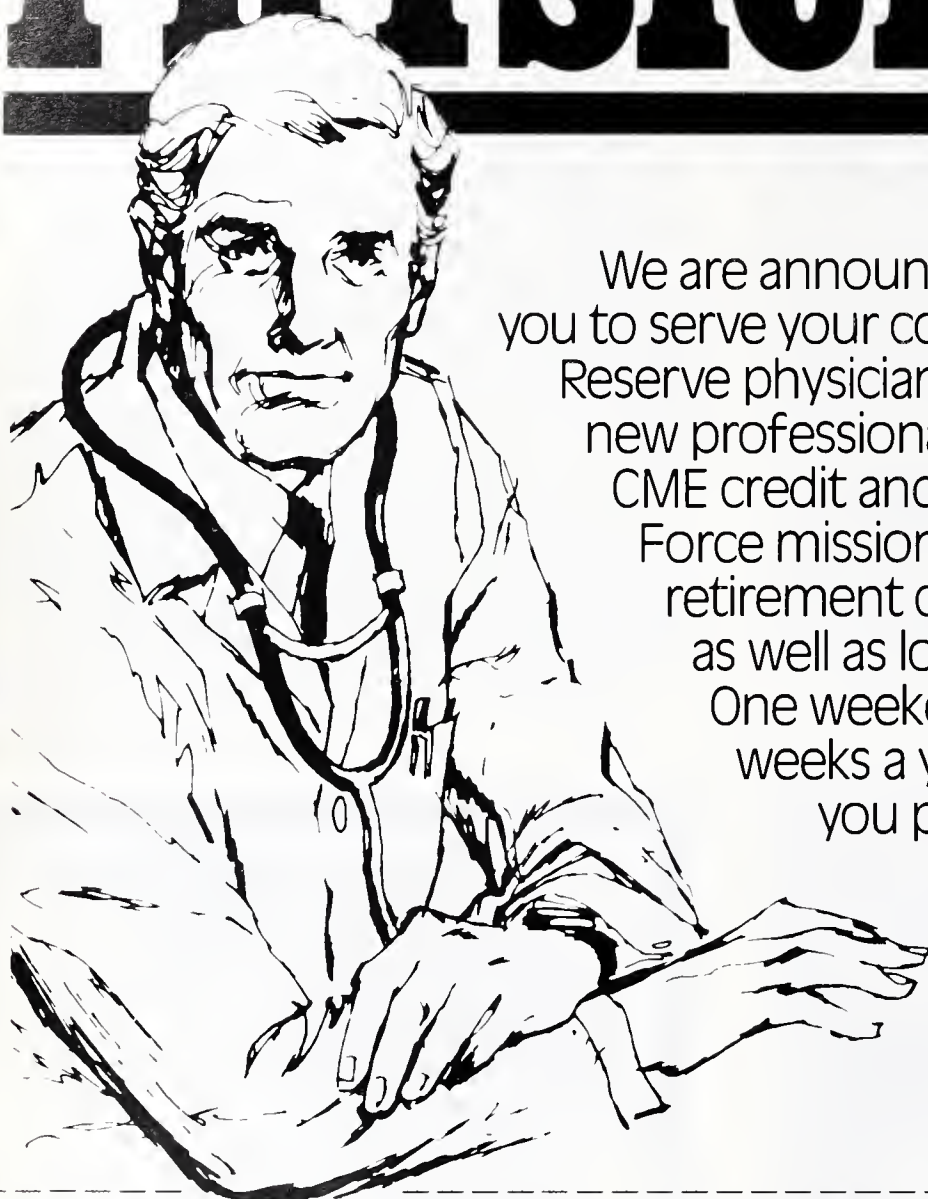
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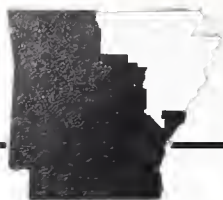
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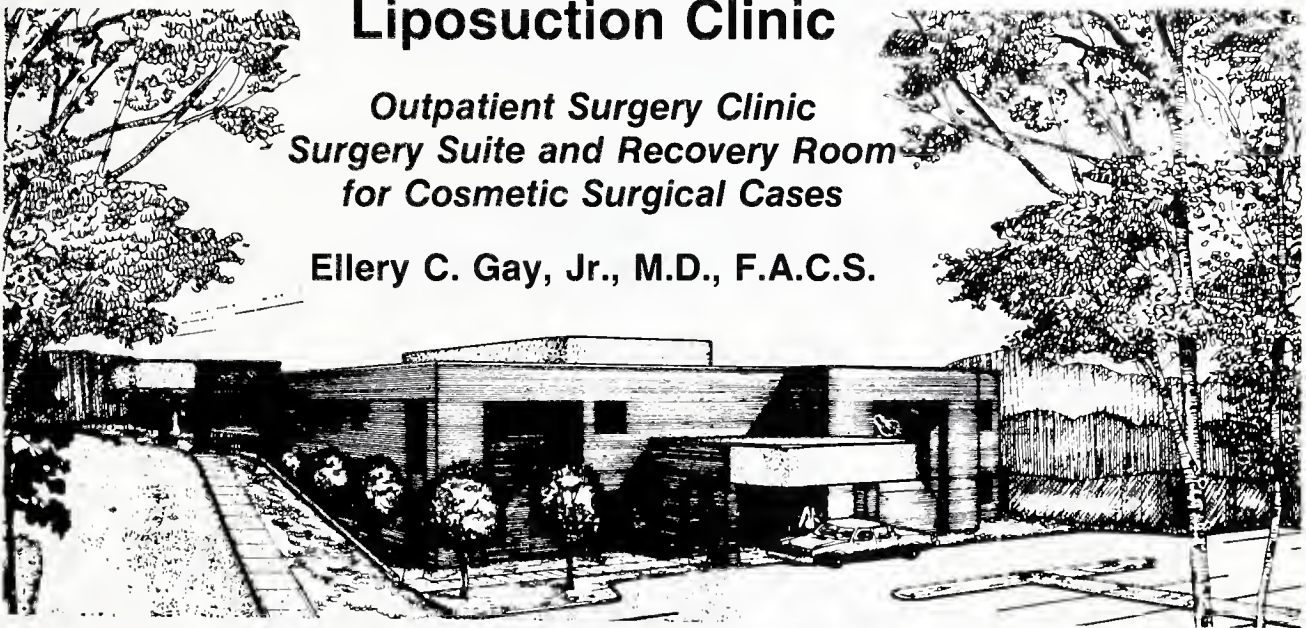
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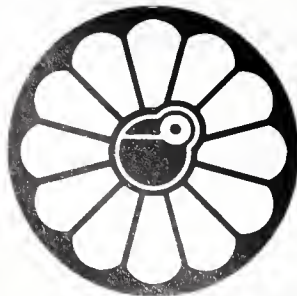
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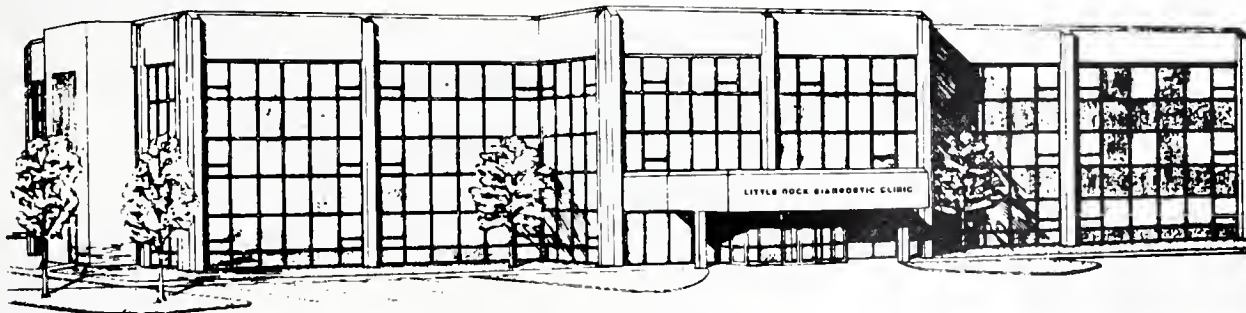
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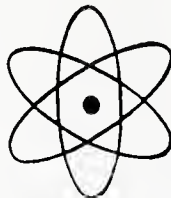
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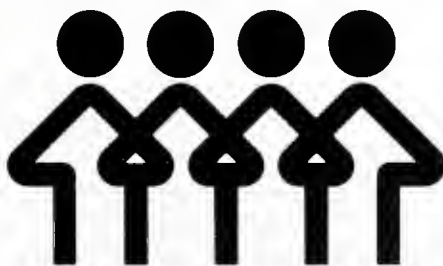
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Prevention of hypokalemia requires particular attention in patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis and ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, certain diarrheal states, or other states where hypokalemia is thought to represent particular added risk to the patients.

In patients with hepatic cirrhosis and ascites, sudden alterations of electrolyte balance may precipitate hepatic encephalopathy and coma. Treatment in such patients is best initiated in the hospital with small doses and careful monitoring of the patient's clinical status and electrolyte balance. Supplemental potassium and/or spironolactone may prevent hypokalemia and metabolic alkalosis in these patients. In cats, dogs and guinea pigs, Bumex has been shown to produce ataxicity. Since Bumex is about 40 to 60 times as potent as furosemide, it is anticipated that blood levels necessary to produce ataxicity will rarely be achieved. The potential for ataxicity increases with intravenous therapy, especially at high doses.

Patients allergic to sulfonamides may show hypersensitivity to Bumex.

PRECAUTIONS: Measure serum potassium periodically and add potassium supplements or potassium-sparing diuretics, if necessary. Periodic determinations of other electrolytes are advised in patients treated with high doses or for prolonged periods, particularly in those on low salt diets.

Hyperuricemia may occur. Reversible elevations of the BUN and creatinine may occur, especially with dehydration and in patients with renal insufficiency. Bumex may increase urinary calcium excretion. Possibility of effect on glucose metabolism exists. Periodic determinations of blood sugar should be done, particularly in patients with diabetes or suspected latent diabetes. Patients should be observed regularly for possible occurrence of blood dyscrasias, liver damage or idiosyncratic reactions.

Especially in presence of impaired renal function, use of parenterally administered Bumex should be avoided in patients to whom aminoglycoside antibiotics are also being given, except in life-threatening conditions.

Drugs with nephrotoxic potential and bumetanide should not be administered simultaneously. Since lithium reduces renal clearance and adds a high risk of lithium toxicity, it should not be given with diuretics.

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Volume 84 Number 4

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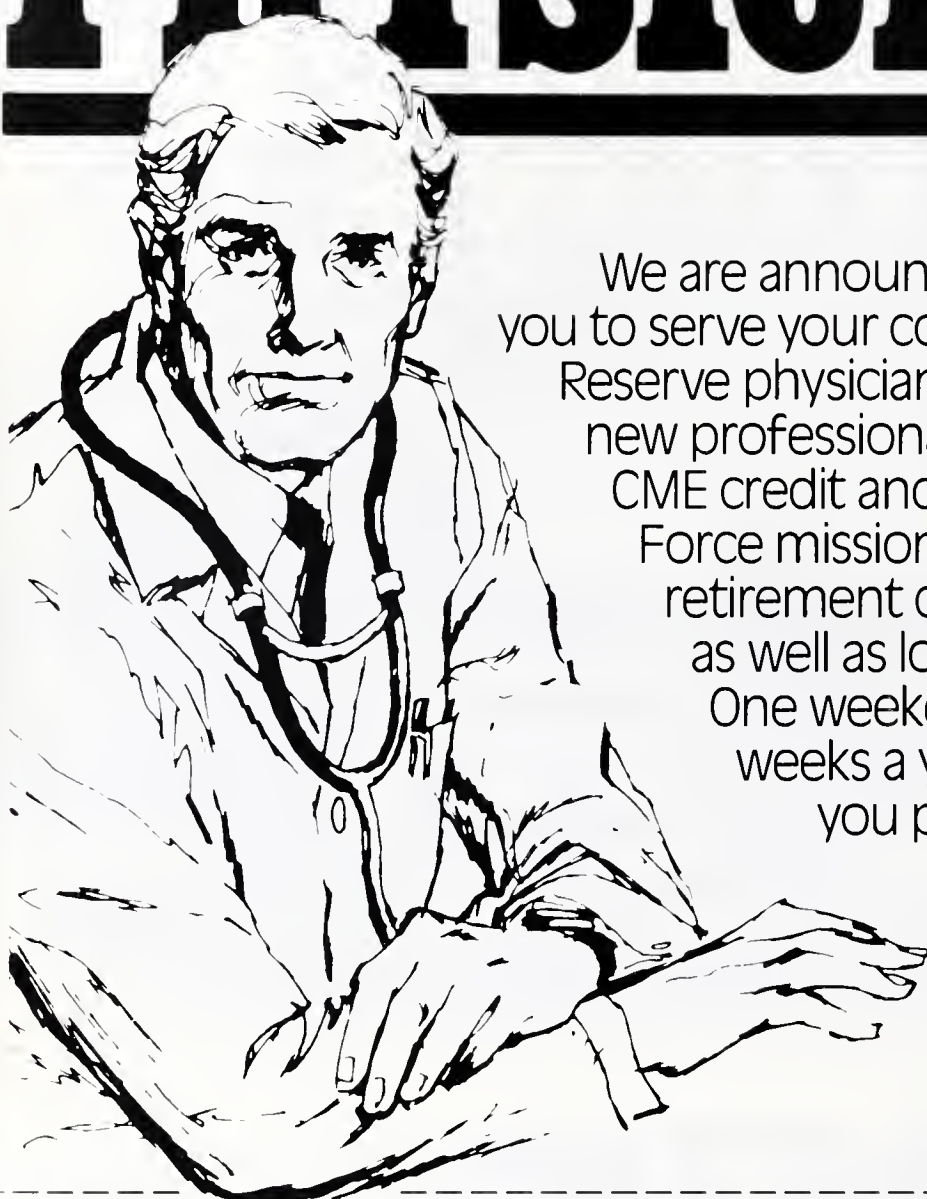
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Update: September 1987
Transmission of AIDS Virus to Infants

A. S. Fitzhugh, M.D.*

Although AIDS in children under 13 years of age has not been reported in Arkansas, it could certainly occur and should be considered in those in the high risk category.

AIDS in infants varies considerably from AIDS in older children and adults. This difference exists in the mode of transmission, the incubation period, and the duration of the disease. There is also considerable difference in the clinical and laboratory profile.

The transmission of AIDS infection to infants is almost always perinatal from the mother, either transplacentally during pregnancy or during the birth process. Breast-feeding may transmit the virus. Very rarely the virus is contracted through blood transfusions.

The most important clue to the possibility of AIDS is the parents' history. Drug addiction, promiscuity, bisexuality in the father, and a history of blood transfusions (prior to the universal testing of blood for the HIV antibody) in the parents are indicative of high risk.

Clinically, the infant may gain weight poorly and be classified as "failure to thrive." He or she may have frequent respiratory infections, cough, and physical and x-ray findings of interstitial pneumonitis.

This may be idiopathic in the form of lymphocytic infiltrates in the interstitial spaces, or it may be confused with the many infections of the lower airways to which the im-

mune deficient child is subjected. Lymphocytic interstitial pneumonitis is not frequent in adults with AIDS. Hepatosplenomegaly frequently is present as is chronic persistent diarrhea.

The usual infections of childhood may occur and be more severe and frequent. The so-called opportunistic infections may have a somewhat different pattern than in the adult AIDS patient. These infections are: pneumocysti carinni pneumonia, chronic cryptosporidiosis, dis-

Arkansas AIDS Statistics*

The numbers to the right of the totals indicate the amount of change since the previous month's report which appeared in the Journal. No change is indicated by (NC).

Cases reported as of August 19				66	(+3)
Deaths as of August 19				40	(+1)
Cases reported since January 1				26	(+3)
Cases					
Male	61	(+3)	92%		
Female	5	(NC)	8%		
Risk Groups					
Homo/Bisexual**	53	(+2)	80%		
IV Drug User	7	(+1)	11%		
Hemophiliac	0				
Transfusion	2	(NC)	3%		
Heterosexual	3	(NC)	5%		
Unknown	1	(NC)	1%		
Race					
White	52	(+3)	80%		
Black	13	(NC)	20%		
Unknown	1	(NC)	1%		
Age Groups					
<20	0	(NC)			
20-29	25	(+1)	38%		
30-39	26	(+2)	39%		
40-49	12	(NC)	18%		
50-59	2	(+1)	3%		
60 or >	1	(NC)	2%		

**Of the 53 homo/bisexual AIDS patients, 16 (30%) are/were IV drug users.

*Source: Arkansas Health Department

seminated toxoplasmosis (after one month of age), extraintestinal strongyloidiosis, candidiosis (esophageal, bronchial or pulmonary), extrapulmonary cryptococcosis, disseminated histoplasmosis, mycobacterial infection, cytomegalovirus infection (with the onset after one month of age), and severe fungal infections.

Although not as frequent as in adults, Kaposi's sar-

*Assistant Director, Arkansas Department of Health, 4815 West Markham, Little Rock, Arkansas 72205.

oma may occur. B-cell non-Hodgkins lymphoma and primary lymphoma of the brain may also occur.

The laboratory work-up should include complete blood count, absolute T-4 lymphocyte count, T-4/T-8 ratio which is frequently less than one. The immune globulin usually is elevated.

The ELISA test for AIDs virus antibodies is usually positive, but not as consistently as in adults. The Western Blot may also be non-reactive, although it seems to be more consistent with the diagnosis than the ELISA. (Borkowsky in *The Lancet*, May 23, 1987). Uninfected infants may have positive ELISA tests, due to the mothers' antibodies, up to age 15 months.

The period from birth to the onset of AIDS disease is usually about six months. The period between onset of illness until diagnosis is sometimes several weeks, particularly in areas where the disease is rare and not suspected by the clinician.

In a recent issue of *Ob-Gyn* (March, 1987), the authors reported that 34 infants, born of mothers free of any signs of AIDS during pregnancy, developed AIDS in the first few months of life. After a follow-up of the mothers for 27 months, 15 developed AIDS or AIDS related complex. This emphasizes the need to take a thorough history of the perspective mother's lifestyle.

The question of the effectiveness and safety of immunization in AIDs infected children is not fully known. However, in cases of AIDS in infants, or if there is an

AIDS patient in the family, live virus vaccine should not be given. In addition, B.C.G. for T.B. should not be given.

In summary, AIDS should be suspected during the perinatal and neonatal period where there is a parental history of drug addiction; promiscuity in either mate, particularly when the male is bisexual; or if the mother had multiple transfusions after 1978 and before blood bank testing became the rule.

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Why Have We Stopped Comforting Patients?

Hans H. Neumann, M.D.*

As an older physician, I've arrived at the receiving end of the health-care system, along with many friends and relatives. And from this vantage point, it's painfully evident that a certain callousness has spread among physicians over the past few decades.

A personal example occurred when I was hospitalized after a myocardial infarction four years ago. Two days after I was admitted, while a young resident was examining me, I commented casually, "You know, I feel remarkably well considering it's been only 48 hours since my coronary."

"Don't let that deceive you," he replied. "You're in serious danger." Next, an intern, shaking his head knowingly, told me, "I don't like your ECG." And then there was the staff physician I asked about my chances of re-

Appalled by hard-hearted doctors, the author wonders who repealed the commandment, "To cure sometimes,...to comfort always."

covery. "It's too early to tell," was all he would say.

No doubt these doctors were imparting the unvarnished truth, but I couldn't help comparing them with my own physician - a member of the older, more compassionate school of medicine. "Barring any unforeseen developments, your chances are excellent," he said. "Your ECG shows the expected evolution, and you're making progress."

Lest you think I'm overly sensitive, or that I'm critical of only my younger colleagues, consider the case of Ann, a close friend and neighbor. On her first visit to an established surgeon, she was told that her breast cancer was inoperable. The doctor added he could "hold out no hope whatsoever."

"How long do I have to live?" Ann asked.

"One or two years," was his pronouncement.

Ann was devastated, as you might imagine - and far more so than she might have been had the surgeon offered a dram of hope. What would it have cost him to add a mild modifier such as "Of course, I've seen similar cases in which patients have done remarkably well for many years."

In fact, thanks to chemotherapy, Ann was able to go skiing in Switzerland three years later. But the surgeon wasn't around to share her good fortune: He'd died of a heart attack two years earlier. I've often wondered how he might have reacted if someone had told him, just before he saw Ann, that he had only a year to live - particularly if his physicians reminded him once a week that although he was feeling fine, early death was unavoidable.

That's what eventually drove Ann to quit chemotherapy. Yes, it was helping her to survive, but she couldn't endure the steady stream of bad-news bulletins from the treatment team. Through sophisticated screening, they'd tell her, new nodules had been found here and there. In essence, the doctors used nearly every visit as an opportunity to give Ann a new death sentence.

In conversations with me, it was obvious that Ann was all but begging for someone to let her see a ray of hope. She got it when she turned to an expensive quack who ridiculed chemotherapy and lifted her spirits with promises of a diet-and-vitamin cure. A short time after she abandoned medicine - or was it the other way around? - Ann was dead.

What prompts a physician to report each new metastatic lesion to a patient who's already staring death in the face? Could it be professional pride, an urge to show off his cleverness at detecting malignancies that haven't yet produced symptoms? Certainly it's not because he feels it will help the patient in any way.

In the past, most physicians couldn't help realizing that medicine is both a science and an art. And most

*Dr. Neumann, a public health physician in Connecticut, suffered a fatal heart attack shortly after this article went to press.

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...ered it their duty to comfort when they could not. However, as science has advanced the ability to heal, many of us have neglected to master the art of comforting. Moreover, some openly argue against it now, maintaining that patients must be told "the whole truth, and nothing but the truth" to guard against malpractice litigation.

The sad fact is that - because of professional vanity, fascination with technology, a consuming fear of attorneys, or whatever - too many doctors have misplaced their compassion. They concentrate blindly - even misanthropically - on the negative.

Take the case of Mildred, a relative of mine. When exploratory surgery revealed her liver cancer, she was referred to an oncologist. She told me that after the doctor read her pathology report, he reached into his desk drawer and withdrew a slender stick.

"This is what you need," he said, waving it in front of Mildred and her husband.

"What is it?" asked Mildred.

"It's a magic wand," the oncologist replied. "That's the only thing that can help you now."

When she recounted the incident to me, Mildred said, "The man actually grinned when he said this. Did he think I would find it funny?"

Since he kept the "wand" in his desk, the doctor apparently used this technique quite often. Yet he never mentioned - to Mildred anyway - that periods of remission were possible, even predictable, in cases like hers. The encounter had a devastating effect on her, doubling the burden of her disease with iatrogenic depression.

When painted into such a dark corner by a physician, it's not surprising that even the most intelligent and educated patient will quit medicine in favor of quackery. And a myriad of quacks will happily accept a sick person's fortune in payment for vague claims laced with sympathetic encouragement.

"Six months ago," Mildred told me, "I would have laughed at anyone who went to a psychic or acupuncturist because he claimed he could achieve long-term cancer remissions. But now I'm seeing both." Mildred felt she could either do that - or succumb to the doctor-induced depression.

Unfortunately, patients are often provoked to turn their backs on medicine at a stage when it can still offer a great deal of temporary or palliative help - and, once in a while, even a cure. Such a tragedy was narrowly averted in the case of my friend Bill. He'd been on some medication that made his white count drop to zero. After a few days of hospitalization, a consulting hematologist explained the gravity of the situation to him in cold detail, ending with the statement, "The outlook is grim, and your chances of recovery are minimal."

In reaction, Bill told his family he wanted to end reverse isolation, along with all other treatment, and go home to die. It took a lot of persuading by his wife and

sons to counteract the doctor's hopeless prognosis, but Bill decided to stay in the hospital. On the fifth day, his white count was 300. On the eighth, it was back to normal. Bill is fine today. What he remembers most about his illness is the hematologist's "sadistic lecture" (his phrase, not mine).

I don't question the need to fully inform the patient and family, but I do wonder what harm would have been done if that doctor had tempered his gloomy opinion with words such as: "So far, your lab tests don't show the improvement I've been hoping for. On the other hand, tests only give a part of the picture. Your positive attitude and strong constitution are factors in your favor."

Must patients be told "the whole truth, and nothing but the truth" to guard against litigation?

There are any number of ways to cushion the blow. When it looks as if nothing short of a miracle will help a patient, a doctor might say: "Every day, the survival statistics improve for people with this type of illness. Long range, your life expectancy may be less than we'd both like it to be, but certainly there's no reason to give up hope. We can remain cautiously optimistic."

Even AIDS patients can honestly be told: "People differ in their ability to resist the progress of this disease. You could well have long periods in which your life will be quite normal. Also, advances in treatment are being achieved all over the world. Some exciting new drugs are being tested right now, and nobody knows how quickly they could become available. I know it's hard to do, but bear in mind that help is on the way."

What happened to this part of truth in medicine?

I suspect that physicians who have the crepe-hanging tendency are usually oblivious to it because most patients are too polite, intimidated, or preoccupied by illness to speak up. Of all the friends who've complained to me about their prophet-of-doom physicians, only Steve had the wherewithal to do something about one.

As he recalled the confrontation, which occurred in a hospital, he said: "Doctor, I'm not quite sure how to put this, but after each of your visits I feel worse than before. I already know I'm real sick, so don't bother telling me over and over again. In fact, unless you can bring me some good news, why don't you just stay away?"

Taken aback, the physician sat down on Steve's bed and said: "Tell me more. If I'm doing this to you, I must be doing it to other patients, too." They worked out a more cheerful relationship for the duration of the illness, and have been friends ever since.

Clearly, however, it would have been better had the doctor *behaved* like a friend from the outset, recognizing

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Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first-degree block, 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE. Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema) — PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY. The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA. Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS. Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism including thyroid storm. Propranolol may change thyroid function tests, increasing T₄ and reverse T₃, and decreasing T₃.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case, this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL. Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should

be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

CLINICAL LABORATORY TESTS. Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS. Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered a calcium-channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardial contractility or atrioventricular conduction. On rare occasions, the concomitant intravenous use of a beta blocker and verapamil has resulted in serious adverse reactions, especially in patients with severe cardiomyopathy, congestive heart failure or recent myocardial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol.

Ethanol slows the rate of absorption of propranolol.

Phenytoin, phenobarbital, and rifampin accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased plasma levels of both drugs.

Antipyrine and lidocaine have reduced clearance when used concomitantly with propranolol.

Thyroxine may result in a lower than expected T₃ concentration when used concomitantly with propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY. Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY. Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS. INDERAL is excreted in human milk. Caution should be exercised when INDERAL (propranolol HCl) is administered to a nursing woman.

PEDIATRIC USE. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular. Bradycardia, congestive heart failure, intensification of AV block, hypotension, paresthesia of hands, thrombocytopenic purpura, arterial insufficiency, usually of the Raynaud type.

Central Nervous System. Light-headedness, mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia, visual disturbances, hallucinations, vivid dreams, an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics. For immediate formulations, fatigue, lethargy, and vivid dreams appear dose related.

Gastrointestinal. Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic. Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory. Bronchospasm.

Hematologic. Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune. In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous. Alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL Tablets to INDERAL LA Capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg-for-mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION — Dosage must be individualized. The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood-pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS — Dosage must be individualized. Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three- to seven-day intervals until optimal response is obtained. Although individual patients may respond at any dosage level, the average optimal dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE — Dosage must be individualized. The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximal dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS — 80-160 mg INDERAL LA once daily. PEDIATRIC DOSAGE — At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

REFERENCES:

- INDERAL LA National Compliance Evaluation Program. Data on file, Ayerst Laboratories.
- Ravid M, Lang R, Jutrin I: The relative antihypertensive potency of propranolol, oxprenolol, atenolol, and metoprolol given once daily. *Arch Intern Med* 1985; 145:1321-1323.

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the damage that discouraging words can cause. Not only does negativism sour patients on legitimate palliative or life-extending medicine, but it denies them the therapeutic effect of the visit itself. Norman Cousins and others have repeatedly demonstrated that what a physician says to his patients can be physiologically beneficial in no small degree. It can motivate, reassure, and sometimes represent the best treatment available. A glimmer of hope serves as an incentive to fight for survival, making the final months of illness more bearable. With hope, it's easier to stay alive - and it's easier to die, too.

I'm not suggesting that our profession is devoid of doctors who *do* understand the positive impact of comfort and reassurance, even when given cautiously, mindful of legal constraints. And there are patients who don't seem to care much either way. But as one such woman reported to me after seeing her oncologist: "I told him I was ready to meet my maker. And do you know what he

said? 'I'm not sure your maker is ready to meet you. Certainly your children aren't ready to turn you over to him just yet.' That made me think he doesn't expect me to die so soon." She was quite buoyed up.

Physicians who possess the mysterious ability to make patients feel better merely by talking with them have mastered the art of comforting. In large part, it's a matter of conveying optimism. That's what patients need most when their health is declining.

Of course, the prognosis - however bleak - must be truthful. But a doctor who provides the patient only with textbook translations of lab reports is, at best, a competent scientist. The sick person rightfully expects his physician to help him through any illness, especially the final one. And a real medical professional does just that.

Once it was common to hear patients say, "The doctor was here; I feel better." It can be again, if we remember "to cure sometimes,...to comfort always."

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Pelvic Fracture Disruptions: Diagnosis and Treatment

Mark P. McAndrew, M.D.* and John Cone, M.D.**

Introduction

Pelvic injuries constitute a major source of mortality and long term morbidity among victims of automotive trauma. Pelvic fractures are second only to skull fractures as the most common bony injuries in patients who die in auto accidents. It is essential that all physicians caring for acutely traumatized patients have a basic understanding of the injuries to which the pelvis is subject.

Pelvic fracture-disruption (PFD) are injuries to the bony pelvis in which the ring is broken in two locations. They have been called many things which has led to confusion in terminology and makes comparison of treatment methods difficult. We will confine this discussion to a simple mechanical-anatomic classification described by Tile and Pennal.

The incidence and severity of PFD has increased with the number of automobiles and their speed. There is approximately one PFD for every five victims of high speed injury. The pelvic injury is accompanied by life-threatening intraabdominal or intrathoracic injury in 10 to 30% of cases. (Peltier, Mcmurtry). However, even in the absence of associated injuries, the PFD is in itself life-threatening because of potential massive hemorrhage from the well-vascularized bond or lacerated vessels lining the pelvis - commonly branches of the internal iliac vein, though injuries to branches of the internal iliac artery or larger pelvic vessels may also occur. The American College of Surgeons has recently recognized this potential force for serious injury and now recommends an Anterior-Posterior (AP) pelvic film during the primary survey of most trauma patients (ATLS).

Pelvic Anatomy

The anatomy of the pelvis and surrounding soft tis-

ues must be understood in order to fully comprehend the threat of PFD's to life and function. The pelvis is composed of two halves joined anteriorly by the symphysis pubis and posteriorly by the sacrum and its investing ligaments. During the standing phase of gait, body weight is transferred from the spine to the femoral head via the sacrum, sacroiliac joint, the hemipelvis above the acetabulum, and the acetabulum (Fig. 1). The remainder of the hemipelvis functions as a point of attachment for muscles and ligaments.

The physician should always suspect a pelvic fracture when faced with a patient who has a history of high energy blunt trauma. In spite of a strong suspicion, the clinical evaluation of a severely traumatized patient for pelvic fracture is often difficult. The pelvis is covered by muscles and other soft tissues as well as pneumatic anti-shock garments in many cases. Although the pelvis may be relatively inaccessible, the examination should begin with palpation for tenderness or crepitance. A simple approach is to palpate the symphysis and sacroiliac joints

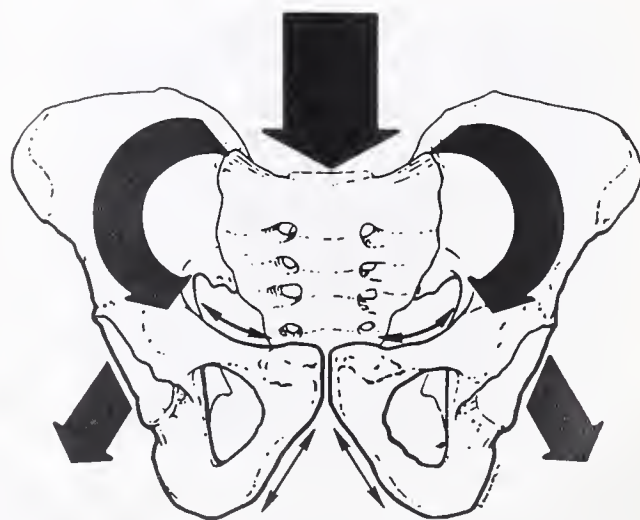


Figure 1. Weight-bearing stress on the pelvis. Copyright (c) 1965 and published by Journal of Bone and Joint Surgery, Boston, MA 02155. Reprinted by permission.

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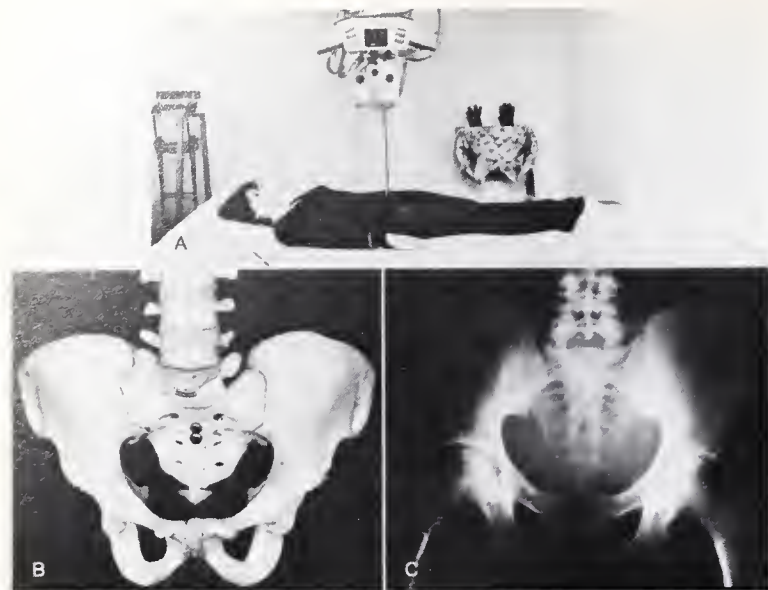


Figure 2. A. For the anteroposterior projection, the beam is directed perpendicular to the midpelvis and the radiological plate. B. Anatomical appearance of the pelvis in the anteroposterior plane. C. Radiographic appearance of the pelvis in the anteroposterior plane. Copyright (c) 1984 and published by Williams & Wilkins, Co. Baltimore, MD 21202. Reprinted by permission.

and then to press the iliac wings together. If none of these maneuvers are painful in the conscious patient or lead to gross motion in the unconscious patient, the pelvis is not grossly disrupted. However, these maneuvers do not rule out significant pelvic fractures. Swelling or ecchymoses over the pubis, the perineum, the medial thigh or the lumbosacral regions should also suggest pelvic fracture.

Diagnostic Methods

Radiographs are the most frequent methods of diagnosing bony pelvic injuries. However, interpreting two dimensional images of a three dimensional multi-planar structure is difficult. To simplify this problem, Professor Marvin Tile and his mentor, Dr. George Pennal, developed an injury classification based on three radiographic views. These views are easily obtained without moving the patient. Two of these views will be familiar to most physicians, the AP and pelvic outlet or obstetrical view (beam tilted 45° caudad). The third or inlet view is taken with the beam tilted 45° cephalad.

Each view has important landmarks to be observed. The AP is the initial screening view and shows the anterior pelvis well. This view will demonstrate a separation or diastasis of the pubic symphysis as well as fractures of the pubis or ischium (Fig. 2). More importantly, but more difficult to see, are the asymmetries of the sacroiliac (SI) joints and sacrum that indicate fractures or dislocations posteriorly. Posterior injuries make the pelvis unstable and increase the likelihood of major hemorrhage due to the proximity of multiple vessels. The inlet and outlet views are then obtained to demonstrate the sacrum and SI joints more clearly. They should be obtained in all cases of pelvic fracture to further delineate the injury and direct therapy. The inlet view shows most

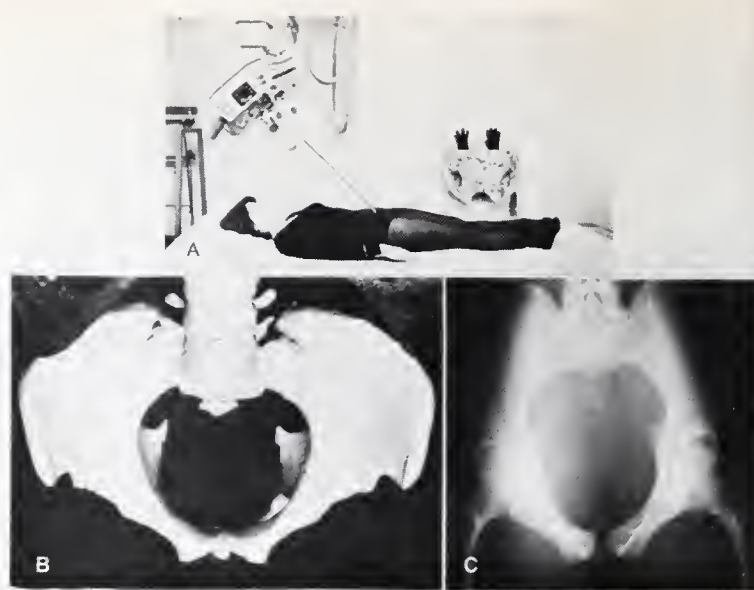


Figure 3. A. For the inlet projection, the beam is directed from the head to the midpelvis at an angle of 60° to the plate. B. Anatomical appearance in the inlet projection. C. Radiological appearance in the inlet projection. Copyright (c) 1984 and published by Williams & Wilkins, Co., Baltimore, MD 21202. Reprinted by permission.

clearly disruption of the SI joints with translation of the ilium away from the sacrum (Fig.3). The outlet demonstrates the sacrum and any shift of the acetabulum which may lead to limb shortening if uncorrected (Fig.4).

The composite of these three views allows the disruption of the pelvis to be described in three planes. Simply stated, the hemipelvis may be pulled apart or pushed together from the sides or pulled apart up and down. These are so-called posterior compression, lateral compression and vertical shear, respectively (Figs. 5, 6, 7). Posterior stability which is critical for function is anatomically dependent upon the sacrum and SI ligaments. Any of the three types of disruptions described may be unstable. However, the likelihood of instability is least in AP compression, most for vertical shear and intermediate for lateral compression injuries.

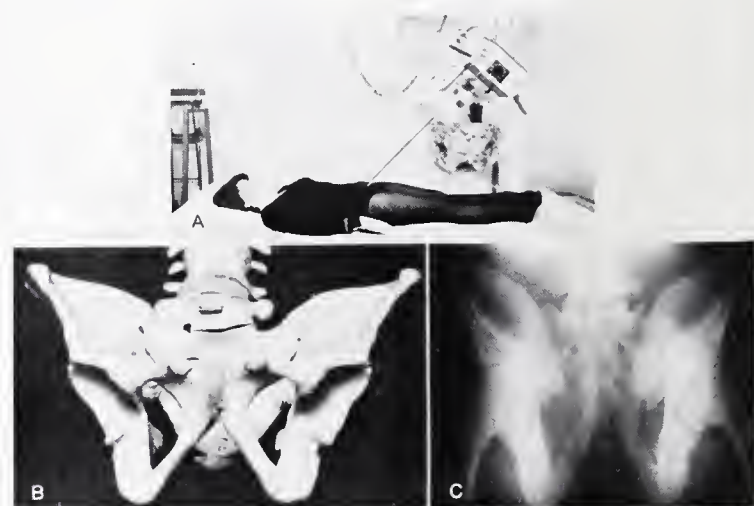


Figure 4. A. For the outlet projection, the beam is directed from the foot to the symphysis at an angle of 40° to the plate. B. Anatomical appearance in the outlet projection. C. Radiological appearance in the outlet projection. Copyright (c) 1984 and published by Williams & Wilkins, Co., Baltimore, MD 21202. Reprinted by permission.

Non-Orthopaedic Problems

The non-orthopaedic problems associated with pelvic fractures may be divided into three categories: hemorrhage, genitourinary tract injuries, and associated injuries. Hemorrhage from vessels within the pelvis is the most consistently encountered problem and is the leading cause of death (Fig 8). Hemorrhage from the pelvic fracture, like hemorrhage from any other site, should not be difficult to diagnose. However, it may be difficult to distinguish whether on-going hemorrhage is a result of the disrupted pelvic vessels or an associated liver or spleen injury.

Genitourinary tract injuries have been reported to occur in 15% of patients with PFD's (Tile). These injuries should be suspected in all patients with pelvic fractures. If the patient is male, then urethral injury should be ruled

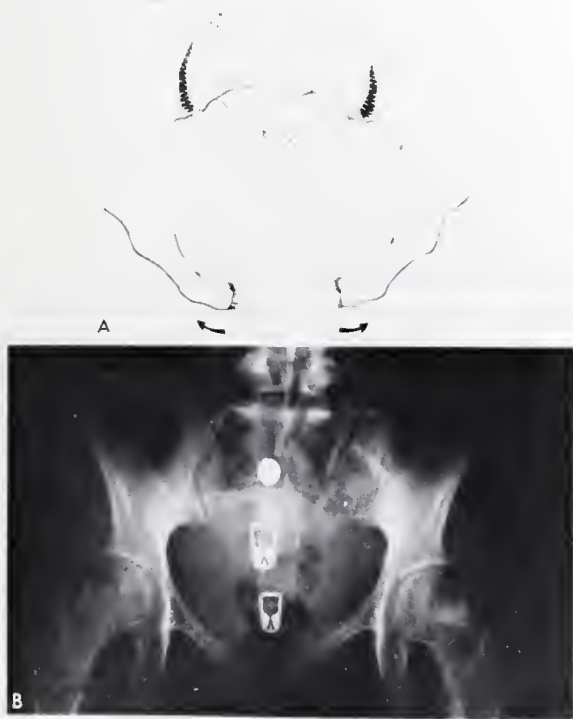


Figure 5. A. Diagram of a typical anteroposterior compression injury (open book type) showing the wide diastasis of the symphysis pubis and disruption of the anterior sacroiliac ligaments. B. Anteroposterior radiograph of the pelvis of a 17-year-old girl struck directly from in front by a motor vehicle, showing a typical open block type of fracture. Copyright (c) 1980 and published by W. B. Saunders Company, Philadelphia, PA 19105. Reprinted by permission.

out prior to passing a catheter. A rectal exam should be done to examine the prostate. If the prostate is either obscured by a fluctuant hematoma or high riding in the pelvis, it is indicative of a urethral disruption. If the patient has hematuria, is unable to void, or if there is blood at the urethral meatus, urethral injury must also be suspected. Whenever there is suspicion of a urethral injury, the evaluation of the genitourinary tract must start with a retrograde urethrogram. The blind insertion of a urinary tract catheter in the presence of an urethral injury carries the risk of converting a partial urethral injury to a complete urethral disruption as well as the possibility

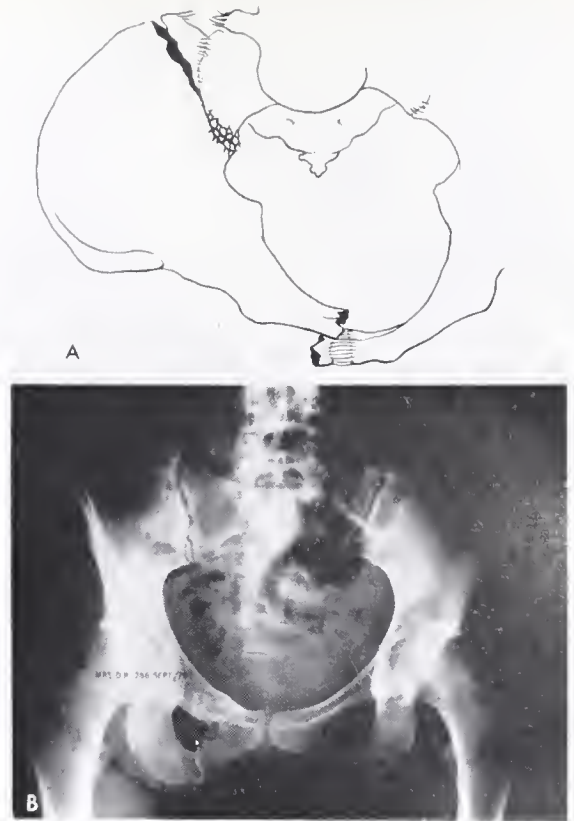


Figure 6. A. Diagram of an ipsilateral type of lateral compression injury showing the posterior disruption and fractures of the pubic rami anteriorly. B. Radiograph of a typical ipsilateral compression injury. Copyright (c) 1980 and published by W. B. Saunders Company, Philadelphia, PA 19105. Reprinted by permission.



Figure 7. A. Diagram of a vertical shear injury showing anterior symphysis pubis disruption and posterior sacroiliac disruption with avulsion of the transverse process of L5, a telltale sign of pelvic instability. B. Radiograph of a 16-year-old girl sustaining this type of injury. Note the avulsion of the ischial spine, another telltale sign of gross pelvic instability. Copyright (c) 1980 and published by W. B. Saunders Company, Philadelphia, PA 19105. Reprinted by permission.

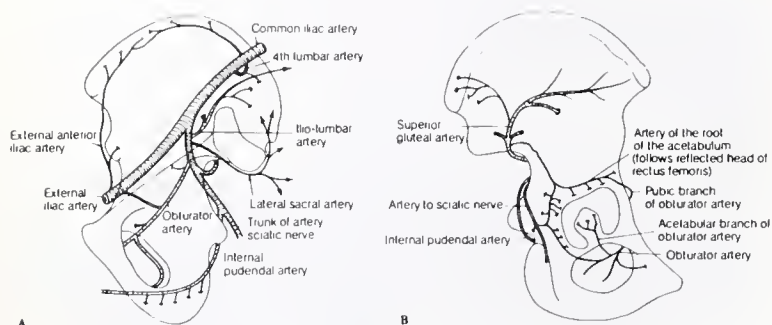


Figure 8. Vascular supply of the innominate bone. A. Internal aspect. B. External aspect (Louis and Bergouin, 1960). Copyright (c) 1981 and published by Springer-Verlag New York, Inc., New York, NY 10010. Reprinted by permission.

of contamination of the pelvic hematoma. When urethral injury has been ruled out, the catheter should be placed through the urethra into the urinary bladder and 300/400 cc's of contrast material instilled. X-rays should be obtained with the bladder distended and following evacuation. If the patient has demonstrated hematuria but the distal urinary tract has demonstrated no cause, an intravenous pyelogram should then be performed to evaluate the kidney and ureters. A missed genitourinary injury leads to a much higher risk of pelvic sepsis.

Major abdominal visceral injuries are commonly seen in association with pelvic fractures but are often difficult to recognize. Although a careful physical examination is an essential part of the early work-up, it is often unreliable in patients with major pelvic fractures, patients with head injuries, or patients with an altered sensorium from drugs or alcohol. In cases where physical examination is unreliable, the standard diagnostic modality had been peritoneal lavage. However, the standard infraumbilical approach to performing peritoneal lavage leads to as high as a 50% false positive rate due to disruption of the pelvic hematoma. We are currently using peritoneal lavage performed in a similar fashion but through a small incision just above the umbilicus in those patients with pelvic fractures. Although there is still a false positive rate of 10 to 15%, it is significantly lower than that with the infraumbilical approach. Several authors have recently advocated the use of CT scanning of the abdomen and pelvis to replace the peritoneal lavage. Although there are now several articles in the literature using this technique, it remains controversial as to its exact role in the management of these injuries. The CT scan is clearly more specific, often demonstrating lacerated spleens or livers, etc. It also offers a semi-quantitative estimate of the amount of free intraperitoneal blood which is pres-

ent. However, it does not appear to be quite as sensitive as peritoneal lavage and has been reported to miss injuries to hollow viscera. It seems probable at this time that in patients with pelvic fractures, CT scan will replace many of the peritoneal lavages and reduce the false-positive rate. We must add a word of caution at this point, however. The studies on computed tomography were done in institutions where the tests were immediately available in-house at any time of day or night and where, because of the high volume of trauma, the radiologists are particularly attuned to identifying injuries. In any circumstance where these situations do not apply,, it is safer to fall back on the old standard of peritoneal lavage which can be performed quickly and interpreted without difficulty.

Neurologic injury is often seen in association with pelvic fracture as well. The nerves at greatest risk are the combined lumbar 4th and 5th nerve roots which are draped over the sacra ala. Such neurologic injuries occur in approximately 3 to 5% of cases and are usually permanent (Tile). The sacral nerve roots are likewise at risk. Therefore testing of sensation over the perineum as well as rectal sphincter tone should be a part of the initial physical examination (Fig. 9).

The foregoing discussion illustrates that pelvic fractures occur in the complex setting of the poly-trauma patient and require rapid and efficient diagnosis and treatment. The specialized treatment modalities for pelvic fractures are centered around control of hemorrhage and stabilization of the pelvis. These are discussed below.

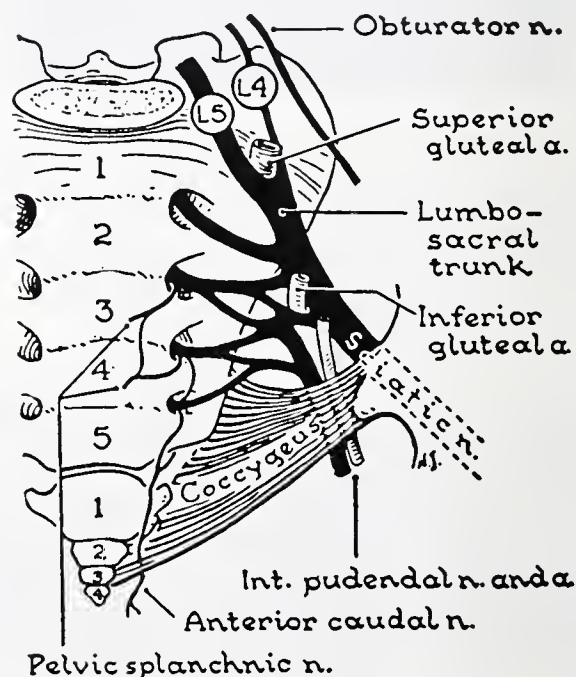


Figure 9. Sacral nerve plexus. Copyright (c) 1980 and published by Williams and Wilkins, Co., Baltimore, MD 21202. Reprinted by permission.

Treatment

The treatment of patients with major pelvic fracture disruptions consists of two phases. Phase one includes resuscitation and control of hemorrhage and repair of any visceral injury. The second phase consists of stabilization of the bony pelvis. These two phases however are not totally independent as will be discussed in more detail below.

Resuscitation

Resuscitation of patients with major pelvic fractures is initially no different than the management of any other trauma patient. Any defect in their perfusion as assessed by blood pressure, heart rate, acidosis, etc., is assumed to be on the basis of hemorrhage and hypovolemia. As taught in the ATLS course, it is essential that the first efforts be directed toward insuring a patent airway and adequate ventilation. When these have been secured, the next priority is stabilizing the circulation. This requires the establishment of adequate vascular access. We would recommend a minimum of two large bore peripheral IVs. The initial resuscitation should be undertaken with a crystalloid solution such as normal saline or Ringer's lactate. Fortunately, most patients will respond to this initial volume replacement with crystalloid solutions. However, if the response has been incomplete or transient after two to four liters of crystalloid solution in an adult, it is wise to proceed to the use of blood products. These may include either typed and cross-matched packed red blood cells, type specific or O negative red cells, dependent on the time factors involved. Transfusion requirements for patients with major pelvic fractures may be tremendous. In the absence of either an open fracture or other associated injuries, most pelvic fractures will tamponade the venous bleeding and stop. However, there is a group representing approximately 20% of the pelvic fractures that require more active intervention.

For those patients who require a transfusion of more than 2000 cc's of blood within the first eight hours post-injury, we have found the pneumatic anti-shock garment (PASG) to be very effective controlling the ongoing blood loss. In these circumstances the PASG is often left in place for 12 to 18 hours and in some circumstances as much as 48 hours. To allow such long-term use of the pneumatic compression garment, it is recommended that pressures within the garment be monitored and kept below 40 mm Hg. In spite of this pressure monitoring, there will be a significant increase in intraabdominal pressure as well as compartment pressure in the lower extremities. For these reasons we recommend the routine use of intubation and mechanical ventilation in these patients. Particularly if there are fractures in the lower extremities, the prolonged use of the pneumatic anti-shock garment is associated with an increased incidence of compartment syndromes.

If the patient fails to achieve hemodynamic stability

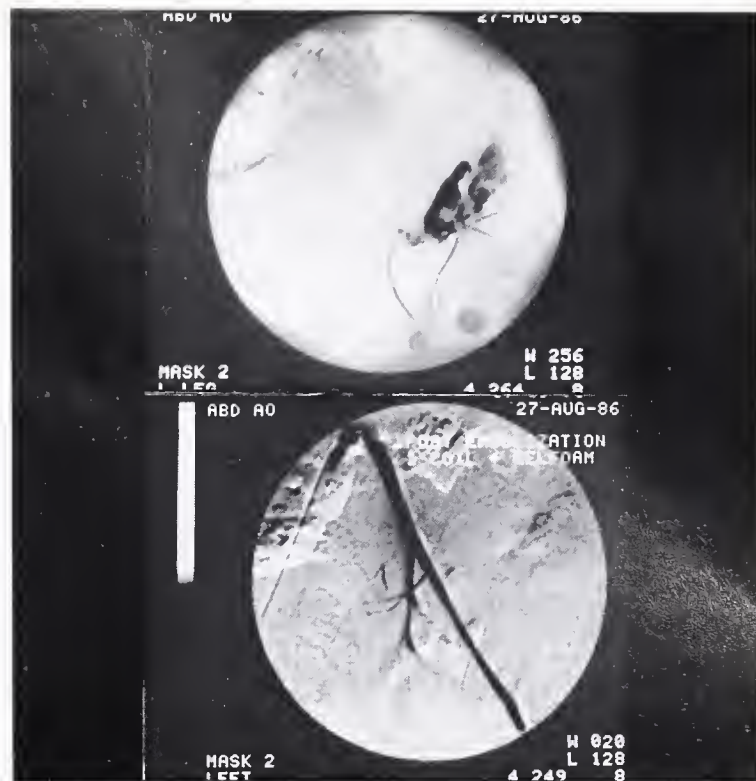


Figure 10. Control of arterial bleeding in the pelvis by selective angiography and embolization.

within two hours of the application of the pneumatic anti-shock garment, this is indicative of a significant arterial injury such as the superior gluteal or pudendal artery. It has been clearly demonstrated on multiple occasions that a surgical approach to lesions in this area is almost uniformly unsuccessful and is associated with massive blood loss secondary to the extensive collaterals. The most effective approach to the control of arterial bleeding in the pelvis is selective angiography and embolization as demonstrated in Fig. 10.

Prior to relying on the pneumatic anti-shock garments or angiography and embolization, it is essential to rule out sources of bleeding other than the pelvis. The pneumatic anti-shock garment or the iliac arteriogram will be ineffective against a ruptured spleen or fractured liver.

Stabilization of the Bony Pelvis

Stabilization of the bony pelvis may overlap significantly with the resuscitation and stabilization phase of patient management. External fixation of the pelvis with the resulting stabilization is often as effective as pneumatic anti-shock garments for reducing pelvic venous bleeding and is not associated with the respiratory embarrassment or compartment syndromes seen with the compression garments. This device also allows the early mobilization of the patient to prevent the complications usually seen with prolonged bed rest such as pneumonia, pulmonary emboli, etc.

External fixation is the most frequently used form of pelvic stabilization in the first five days post-injury (Fig. 11). However, when the posterior aspect of the pelvis is

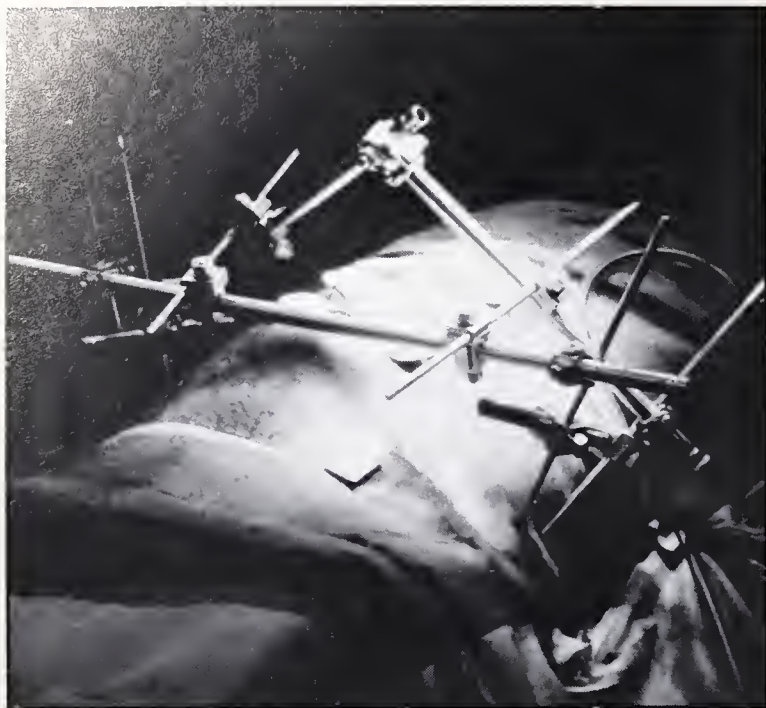


Figure 11. External fixation is most frequently used in the first five days post injury.

disrupted, external fixation alone will not maintain an adequate reduction. An adequate and stable reduction is necessary to prevent prolonged pain and dysfunction from non-union or mal-union of fractures of the sacroiliac joints. Adequate stabilization of these areas more often requires an open reduction and internal fixation from either the posterior or anterior approach to the posterior pelvis. A CT scan of the pelvis is necessary, if not already included in an abdominal CT, to further demonstrate the pathologic anatomy and to direct the surgical reduction (Fig. 12).

A major pelvic fracture disruption in and of itself constitutes multiple trauma. As such, caring for these patients requires a well-coordinated and preplanned effort by general surgeons, orthopaedic surgeons, urologists, and neurosurgeons. While we have discussed the diagnosis and management in distinct sections, it is essential that the resuscitation overlap the diagnostic efforts and the diagnostic efforts overlap the therapeutic efforts. Optimal care for the pelvic fracture disruption patient requires an aggressive approach to recognition and management of associated injuries as well as control of hemorrhage and fracture stabilization. Anything less than an efficient, coordinated, team approach will result in an increased mortality as well as short- and long-term morbidity.



Figure 12. A CT scan should be performed to demonstrate the pathologic anatomy and to direct the surgical reduction.

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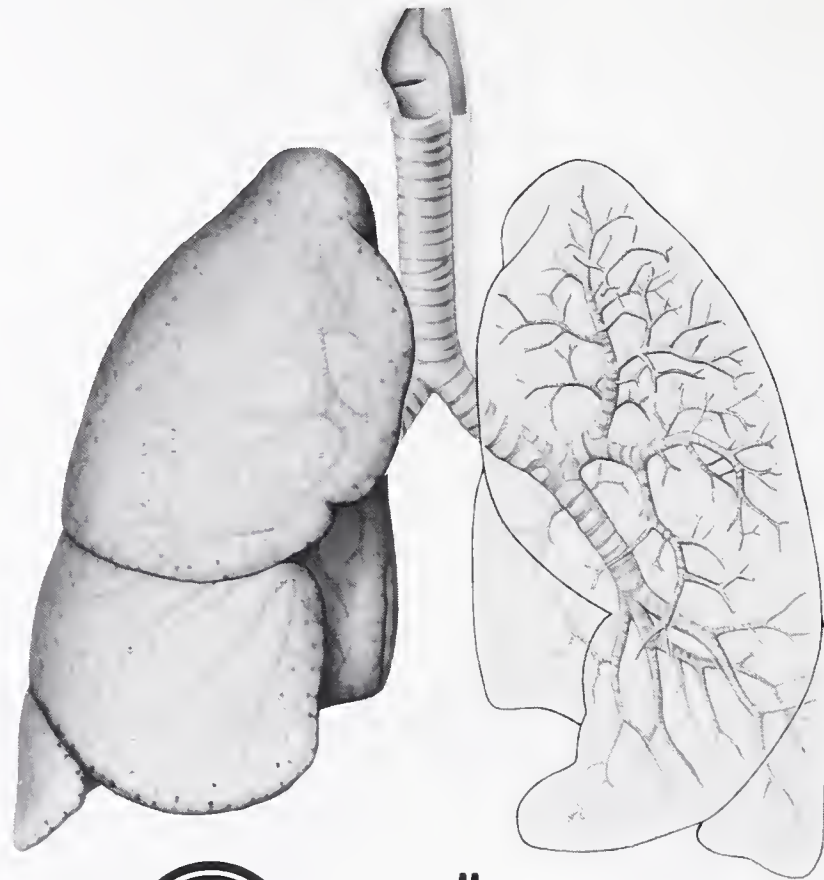


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Administer cautiously to allergic patients. Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:

- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:

- Gastrointestinal (mostly diarrhea): 2.5%.
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever): 1.5%; usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness,

insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.

- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%; and, rarely, thrombocytopenia.

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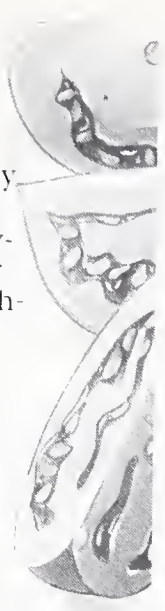


Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285
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700241

There is evidence that diet and cancer are related. Some foods may promote cancer, while others may protect you from it.

Foods related to lowering the risk of cancer of the larynx and esophagus all have high amounts of carotene, a form of Vitamin A which is in cantaloupes, peaches, broccoli, spinach, all dark green leafy vegetables, sweet potatoes, carrots, pumpkin, winter squash, and tomatoes, citrus fruits and brussels sprouts.



Foods that may help reduce the risk of gastrointestinal and respiratory tract cancer are cabbage, broccoli, brussels sprouts, kohlrabi, cauliflower.

Fruits, vegetables and whole-grain cereals such as oatmeal, bran and wheat may help lower the risk of colorectal cancer.

Foods high in fats, salt- or nitrite-cured foods such as ham, and fish and types of sausages smoked by traditional methods should be eaten in moderation.


Be moderate in consumption of alcohol also.

A good rule of thumb is cut down on fat and don't be fat. Weight reduction may lower cancer risk. Our 12-year study of nearly a million Americans uncovered high cancer risks particularly among people 40% or more overweight.



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ELECTROCARDIOGRAM OF THE MONTH

David Martin, M.D.
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UAMS Division of Cardiology
Little Rock, Arkansas

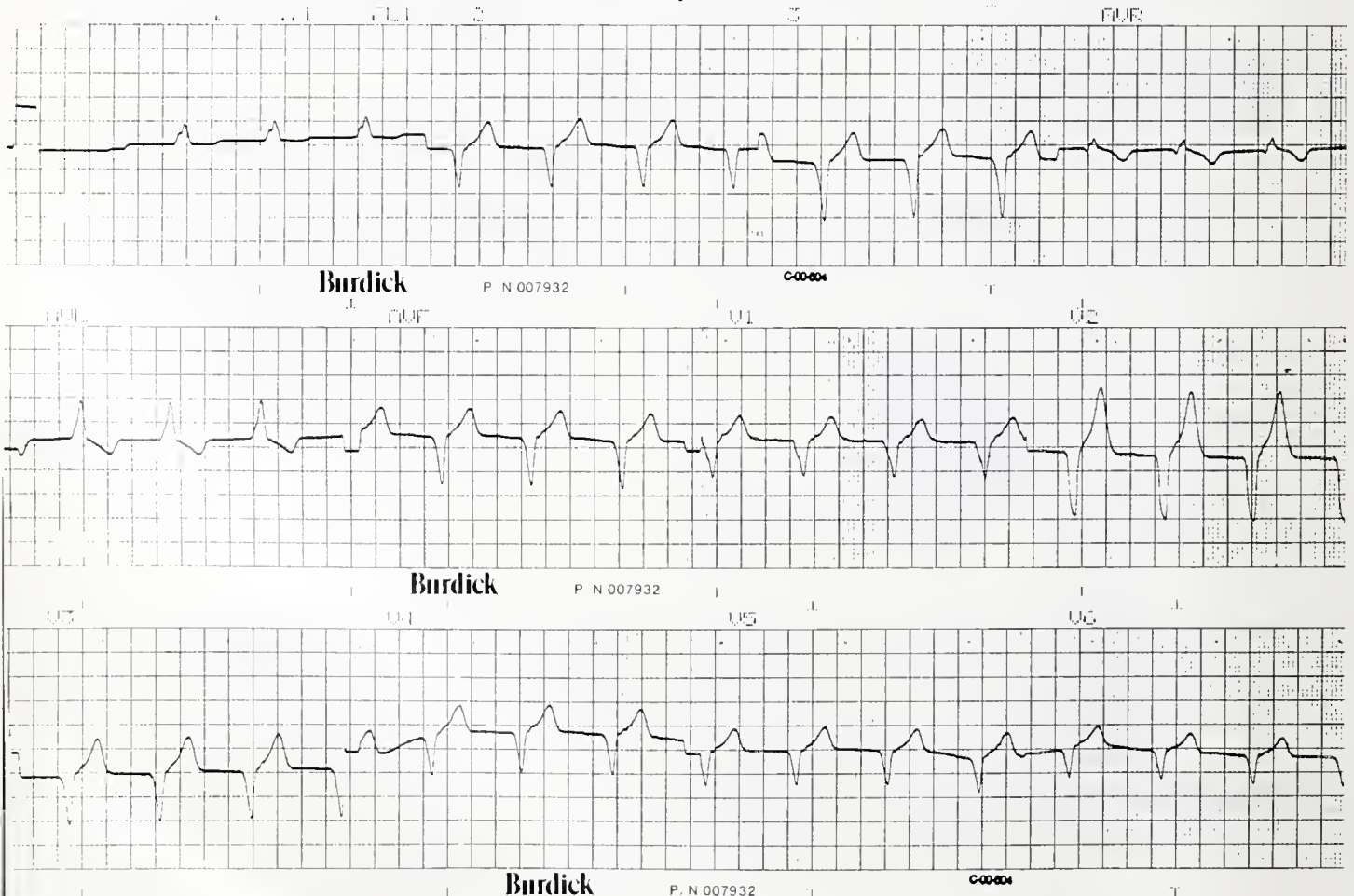
CLINICAL HISTORY:

L. V. is a 43-year-old man who presented to the hospital with chest pain and who went on to evolve typical electrographic changes of acute inferior myocardial infarction. His sinus rate on the cardiac monitor was 50 beats per minute. Abruptly, his rate and mechanism changed. This electrocardiogram was obtained. Other than his rate, his vital signs did not change. What do you think?

DISCUSSION:

No P waves are evident. The rhythm is regular at 79 beats per minute. The QRS exceeds 0.12 seconds. Most probably, this represents accelerated idioventricular rhythm. As is to be expected, the pattern of inferior infarction is not evident on this trace. This arrhythmia was transient but the patient later developed symptomatic ventricular tachycardia at a rate of 150 per minute.

The editor wishes to thank Dr. Martin of Conway for his assistance with this month's ECG.



Carcinoma of the Breast with Axillary Lymph Node Metastasis

*Lawrence A. Mendelsohn, M.D., William E. Atkinson, M.D.,
Michael F. Knox, M.D., and Harold D. Langston, M.D.**

Problem

A 39-year-old woman who had been treated for breast cancer presented to the Second Opinion Panel for a discussion of the management of her case.

Approximately 27 months earlier the patient had a biopsy of a right breast mass which was found to be adenocarcinoma. A right modified radical mastectomy was performed revealing an infiltrating ductal carcinoma of the upper outer quadrant of the right breast with 15 of 24 positive axillary lymph nodes. Estrogen receptor assays (ERA) were negative and progesterone receptor assays (PRA) were positive with 95 fmoles/mg. Bone scan and liver scan were normal and showed no evidence of metastatic disease.

The patient was placed on chemotherapy, consisting of 5-fluorouracil, doxorubicin (Adriamycin), and cyclophosphamide (Cytoxan) (FAC), which was changed to cyclophosphamide, methotrexate, and 5-fluorouracil (CMF), for a total of 12 months. Chemotherapy was followed by local regional irradiation. Radiotherapy included 4,500 rads at 180 rads/day in 25 fractions for five weeks. Chest wall was treated with 6 MeV electrons and peripheral lymphatics with 12 MeV electrons.

Approximately 10 months post-therapy, the patient's carcinoembryonic antigen (CEA) was elevated at a level of 6.3 ng/ml and continued to rise to 30.5 ng/ml over a period of six months. It was at that time that she presented because of her concern over the elevated CEA levels.^{1,2}

The patient smokes one pack of cigarettes a day but does not drink alcohol.

Diagnostic X-Ray Review

Dr. Knox: The most recent radiologic studies were obtained approximately six months ago. These include chest x-ray, upper GI, barium enema, mammogram, CT scans of brain and abdomen, and bone scan. All of these are negative for primary or metastatic neoplasm. Chest x-ray this week shows no active disease. In view of continued increase in CEA, I would recommend repeat CT of abdomen with dynamic bolus technique to evaluate the liver in more detail and colon study (either barium enema or colonoscopy).

Pathology Review

Dr. Atkinson: Review of the histopathology confirms the original diagnosis. An increase in CEA level to 30.5 ng/ml over a relatively short period of time seems to point toward recurrent (metastatic) carcinoma. There are many causes other than cancer for elevated CEAs, namely liver disease, inflammation of the colon, rectal polyps, pancreatitis, bronchitis, emphysema, to name a few.³

Oncology Review

Dr. Mendelsohn: This 39-year-old premenopausal woman has apparently been symptom-free since her breast cancer was diagnosed over two years ago. She had an uneventful right modified radical mastectomy and completed therapy consisting of chemotherapy followed by radiotherapy. Her initial CEA level immediately postoperatively was 7.5 ng/ml, but that level rapidly de-

*St. Vincent Infirmary Cancer Center, St. Vincent Infirmary, Two St. Vincent Circle, Little Rock, AR 72205.

erased to 1.2 ng/ml two weeks after chemotherapy was started. Since the CEA level rose after chemotherapy and radiotherapy were completed, and continued to rise rather rapidly during a six-month period (from 6.3 to 30.5 ng/ml), the panel was concerned that there might be evidence of recurrent breast cancer or distant metastases or even a new primary tumor.

The panel made four recommendations. First, repeat the CT scan of the abdomen since there had been a four-fold increase in the CEA since the last abdominal CT had been performed. Particular attention should be given to the condition of the liver since it is the most likely organ affected when metastatic disease from a non-colon primary cancer is present. Second, a colonoscopy should be performed to rule out a primary colon carcinoma if the repeat abdominal CT of the liver showed no evidence of recurrent or metastatic disease. Third, if both the CT scan and the colonoscopy proved normal, a blind needle biopsy could be considered in order to rule out metastatic disease to the liver even in view of negative radiographic studies. Fourth, the patient should quit smoking to see if it affects the CEA level since smoking has been shown to elevate the CEA.

Radiotherapy Opinion

Dr. Langston: The patient apparently responded well to the therapy given for carcinoma of the right breast. However, additional radiation therapy is not indicated at this point since the cause of her rising CEA levels is unknown. The recommendations made by this panel would help her attending physician determine if recurrent metastatic cancer, a new tumor, or another disease, is

present. Then appropriate therapy would be suggested by her attending physician and discussed with the patient.

Consensus

Rising CEA levels are always a concern for patients who have been diagnosed and successfully treated for cancer. Oftentimes the rapid increase does indicate recurrent or metastatic disease, primarily to the liver. However, there could also be another primary tumor, such as cancer of the colon. As pointed out to the patient, there are many causes for abnormal CEA levels. Determining the cause of this patient's elevated CEA levels could be handled with these four recommendations: (1) repeat the CT scan of the abdomen, (2) perform a colonoscopy, (3) do a blind needle liver biopsy, and (4) get the patient to quit smoking. Depending upon what was causing the elevated CEA levels, the primary physician could discuss the treatment with the patient.

Acknowledgment

The authors wish to thank Marjorie McMinn for her editorial assistance in the preparation of this manuscript.

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MEDICINE IN THE NEWS

Louisiana Requires AIDS Test for Marriage License

Louisiana is the first state to require clinical testing to detect the presence of the AIDS antibody prior to issuance of a marriage license. If the tests indicate the presence of the antibody in either party, an affidavit must be furnished from a physician stating that the physician has informed both parties of the test results and has counselled the parties concerning AIDS. The costs of testing are to be borne by the applicants. A similar measure has passed the Illinois General Assembly and is awaiting the Governor's signature.

AMA Asks for Review of Medicare Act Decision

The AMA has filed its brief with the United States Supreme Court asking it to review the decision of the United States Circuit Court of Appeals for the First Circuit that upheld the constitutionality of the Massachusetts statute which requires physicians to accept the Medicare "reasonable" charge as a condition for medical licensure.

The high court is expected to decide later this year whether to hear the case. Petitioners are the AMA, the Massachusetts Medical Society and Joseph J. O'Connor, M.D.

In question is whether, under the Supremacy Clause of the United States Constitution, a state law may eliminate an option which Congress specifically enacted and deliberately preserved to ensure the proper operation of its federally funded and federally administered health insurance program.

In enacting the Medicare Act Congress deliberately gave physicians the option to charge Medicare beneficiaries an amount which exceeds the Medicare reimbursement level. The Massachusetts statutes explicitly eliminates this federally-created option.

Arkansas Youth Suicide Prevention Commission to Meet

Lieutenant Governor Winston Bryant, who organized and chairs the Arkansas Youth Suicide Prevention Commission, has announced that the second annual statewide conference sponsored by the Commission will be held October 3-2, 1987, at the Excelsior Hotel in Little Rock.

The theme for the conference is "Youth Suicide Prevention: Learning and Organizing".

"The goal of the conference is to provide those interested in establishing community leadership teams with the knowledge to effectively prevent youth suicides in their community," Bryant said. "The conference will provide the information to do just that."

The Arkansas Youth Suicide Prevention Commission has produced a 30-minute video and accompanying teacher's manual and permanently placed a copy in every school district in Arkansas. Effective ways of utilizing the video in the classroom will be among the topics discussed at the conference.

Additionally, the Commission has published an educational brochure which lists the danger signs of potential suicidal victims. Copies of the brochure can be obtained from the Commission at no charge.

First Round of Grants Announced for Medical Malpractice Research

In an effort to alleviate problems related to medical malpractice, The Robert Wood Johnson Foundation announced \$3.2 million in grants will be funded to fourteen projects whose efforts will advance knowledge about what constitutes malpractice, what causes it, and how it can be prevented.

Selected from nearly 300 responses to the request for proposals, the projects will receive up to \$300,000 for a one to three-year period. A second round of grants will bring the total funding for both rounds to as much as \$6 million.

The projects' aims are to determine whether there are identifiable factors in medical practice or among medical practitioners that can help predict malpractice; improve risk management; assess alternative methods of setting malpractice insurance premiums, including both experience-rating systems and no-fault systems; and evaluate the effectiveness of efforts to reform state tort law.

According to Leighton E. Cluff, M.D., president of the Foundation, "While the Foundation is not prescribing or endorsing any particular solution; we hope that these research projects will offer alternative approaches to handling this serious national problem."

Of the fourteen grants awarded, none were given to any institution or persons in Arkansas. The deadline for

submission of proposal letters for the second and final set of grants under the Medical Malpractice Program is December 1987. Completed applications are due in May 1988. Further information can be obtained from the Foundation at (609) 452-8701.

FDA Proposes Revision of Oral Contraceptive Labeling

For the first time, the Food and Drug Administration (FDA) has proposed revision of oral contraceptive labeling guidelines to include information on the Pill's health benefits. An FDA advisory committee recommended changes in labeling that list the Pill's beneficial non-contraceptive effects ranging from reduced menstrual bleeding to decreased incidence of certain types of cancer.

The FDA's proposed guidelines suggest that in addition to preventing pregnancy, oral contraceptives may have important health benefits. Menstrual cycles may become more regular and less painful, blood flow at menstruation may be lighter, and less iron will be lost, thereby reducing the likelihood of iron deficiency anemia. In addition, non-cancerous cysts or lumps in the breasts, as well as ovarian cysts, may form less frequently. It is also thought that pelvic inflammatory disease and ectopic (tubal) pregnancy may also occur less often.

The proposed guidelines also explain that "there is some evidence that oral contraceptive use may provide some protection from cancer of the lining of the uterus and ovarian cancer."

The FDA's new labeling proposal came on the heels of two national Centers for Disease Control (CDC) studies indicating reduced cancer risks through oral contraceptive use. The first, published in the February 13, 1987 issue of the *Journal of the American Medical Association*, concluded that oral contraceptive use "for 12 months or longer conferred protection against all three major histologic microscopic subtypes of endometrial cancer."

The second, published in the March 12, 1987 issue of the *New England Journal of Medicine*, indicated that oral contraceptive use significantly reduced the risk of ovarian cancer. The protective effect was seen in women who had "used oral contraceptives for as little as 3 to 6 months, and it continued for 15 years after use ended."

The CDC conducted the largest study ever undertaken on the oral contraceptive/breast cancer connection. The CDC concluded that long-term use of oral contraceptives does not increase a woman's risk of breast cancer, even if she has a family history of the disease. The study was published in the August 14 issue of the *New England Journal of Medicine*.

Analysis of Medical Malpractice Claims Available

The U. S. General Accounting Office has issued "Medical Malpractice: Characteristics of Claims Closed

in 1984, the fourth in its series of reports on the medical liability crisis. Analyses of 1,706 claims closed in 1984 by 102 insurers is included in the publication. Data is included from each of the 50 states and the District of Columbia. This is the first national review of closed claims since 1978.

The data from GAO show that 57% of the claims analysed were closed without an indemnity payment and that \$349 million was spent to defend claims which were closed without indemnity. That \$349 million is 43% of the estimated \$807 million spent on the defense of the total claims closed in 1984.

GAO's figures showed a disproportionate amount of total damages for pain and suffering (about 62%) awarded in a very small number of high-verdict cases (about 2%). A "high-verdict case" was one in which non-economic damage payments amounted to \$200,000 or more. However, the vast majority of claims in which pain and suffering awards were broken out, awards were \$50,000 or less.

An alarmingly high number of claims (approximately 24%) were filed against physicians in "high-risk specialization" such as obstetrics or surgery, suggesting that the chance of being sued correlates more closely with type of practice, rather than negligence or incompetency.

Autologous Blood Resource Center Established

The American Association of Blood Banks (AABB) has established a National Autologous Blood Resource Center (NABRC) to promote the use of autologous blood and to provide a consultation service to assist the medical community in establishing and utilizing autologous blood services. The growing interest by health care professionals and the public, and the rapidly increasing number of autologous blood programs, prompted the AABB to develop a professional source of information for both professionals and potential patients.

Autologous blood transfusion includes the donation and storage of blood for future need and the salvage and return of blood lost during and after surgery. As a part of a total program of blood conservation, including intraoperative and peri-operative hemodilution, the avoidance of inappropriate blood and component therapy, and the reduction of both surgical and diagnostic blood loss, autologous blood donation and transfusion provides for conservation and appropriate utilization of the limited blood resource. It also reduces complications related to banked blood transfusion, and can be a life-saving source of blood in emergency situations.

While blood transfusions are now as safe as possible, they will never be risk free. Transfusion risks should always be weighed against the potential benefits for each patient.

Physicians, blood bank specialists and allied health professionals, as well as the public have become increasingly aware of autologous donation programs. A 1986

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BRIEF SUMMARY

CONTRAINDICATIONS

There are no known contraindications to the use of sucralfate.

PRECAUTIONS

Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

Drug Interactions: Animal studies have shown that the simultaneous administration of CARAFATE with tetracycline, phenytoin, or dimetidine will result in a statistically significant reduction in the bioavailability of these agents. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. The clinical significance of these animal studies is yet to be defined.

Carcinogenesis, Mutagenesis, Impairment of Fertility: No evidence of drug-related tumorigenicity was found in chronic oral toxicity studies of 24 months' duration conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies have not been conducted.

Pregnancy: Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients, adverse effects were reported in 121 (4.7%). Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

DOSAGE AND ADMINISTRATION

The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

HOW SUPPLIED

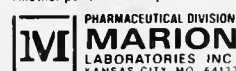
CARAFATE (sucralfate) 1-gm pink tablets are supplied in bottles of 100 and in Unit Dose Identification Paks of 100. The tablets are embossed with MARION/1712.

Issued 3/84

References:

1. Korman MG, Shaw RG, Hansky J, et al: *Gastroenterology* 80:1451-1453, 1981.
2. Korman MG, Hansky J, Merrett AC, et al: *Dig Dis Sci* 27:712-715, 1982.
3. Brandstaetter G, Kratochvil P: *Am J Med* 79(suppl 2C):36-38, 1985.
4. Marks IN, Wright JP, Gilinsky NH, et al: *J Clin Gastroenterol* 8:419-423, 1986.
5. Lam SK, Hui WM, Lau WY, et al: *Gastroenterology* 92:1193-1201, 1987.

Another patient benefit product from



1594H7

Ulcer therapy that won't yield, even to smoking

YIELD



What do you do for duodenal ulcer patients who should stop smoking, but won't? Both cimetidine¹ and ranitidine² have been shown less effective in smokers than nonsmokers.

Choose CARAFATE® (sucralfate/Marion). Two recent studies show Carafate to be as effective in smokers as nonsmokers.^{3,4} A difference further illustrated in a 283-patient study comparing sucralfate to cimetidine⁵:

Ulcer healing rates:
(at four weeks of therapy)⁵

Sucralfate:

All patients 79.4%

Smokers 81.6%*

Cimetidine:

All patients 76.3%

Smokers 62.5%

Carafate has a unique, nonsystemic mode of action that enhances the body's own ulcer healing ability and protects the damaged mucosa from further injury.

When your ulcer patient is a smoker, prescribe the ulcer medication that won't go up in smoke: safe, nonsystemic Carafate.

Nothing works like


CARAFATE®
sucralfate/Marion

Please see adjoining page for references and brief summary of prescribing information.

*Significantly greater than cimetidine smoker group ($P < .05$).

1594H7

There's never been a better time for her.





and PREMARIN[®]

**Proven benefits beyond relief
of vasomotor symptoms**

**No other estrogen proven
effective for osteoporosis**

Only conjugated estrogens tablets have established efficacy in both osteoporosis¹ and vasomotor symptoms* at 0.625 mg/day. No other estrogen, oral or transdermal, has established clinical evidence or minimum effective dose in both indications.

No estrogen proven safer

PREMARIN is the most extensively tested estrogen, with an unsurpassed record of long-term safety.

And clinical evidence shows a significantly reduced risk of endometrial hyperplasia when cycled with a progestin.²

PREMARIN[®]
(conjugated estrogens tablets)

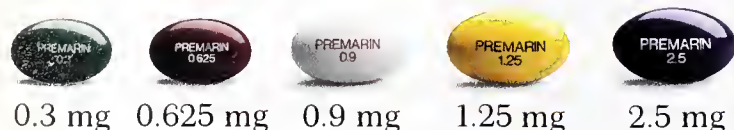
Most trusted for more reasons

*PREMARIN is indicated for moderate-to-severe vasomotor symptoms.

Please see following page for brief summary
of prescribing information.

For moderate-to-severe
vasomotor symptoms and
for osteoporosis

PREMARIN® (conjugated estrogens tablets)



The appearance of these tablets is a trademark of Ayerst Laboratories.

BRIEF SUMMARY (FOR FULL PRESCRIBING INFORMATION AND PATIENT INFORMATION, SEE PACKAGE CIRCULARS.)

PREMARIN® Brand of conjugated estrogens tablets, USP

PREMARIN® Brand of conjugated estrogens Vaginal Cream, in a nonliquefying base

1. ESTROGENS HAVE BEEN REPORTED TO INCREASE THE RISK OF ENDOMETRIAL CARCINOMA

Three independent, case-controlled studies have reported an increased risk of endometrial cancer in postmenopausal women exposed to exogenous estrogens for more than one year. This risk was independent of the other known risk factors for endometrial cancer. These studies are further supported by the finding that incidence rates of endometrial cancer have increased sharply since 1969 in eight different areas of the United States with population-based cancer reporting systems, an increase which may be related to the rapidly expanding use of estrogens during the last decade. The three case-controlled studies reported that the risk of endometrial cancer in estrogen users was about 4.5 to 13.9 times greater than in nonusers. The risk appears to depend on both duration of treatment and on estrogen dose. In view of these findings, when estrogens are used for the treatment of menopausal symptoms, the lowest dose that will control symptoms should be utilized and medication should be discontinued as soon as possible. When prolonged treatment is medically indicated, the patient should be reassessed on at least a semi-annual basis to determine the need for continued therapy. Although the evidence must be considered preliminary, one study suggests that cyclic administration of low doses of estrogen may carry less risk than continuous administration, if therefore appears prudent to utilize such a regimen. Close clinical surveillance of all women taking estrogens is important. In all cases of undiagnosed persistent or recurring abnormal vaginal bleeding, adequate diagnostic measures should be undertaken to rule out malignancy. There is no evidence at present that "natural" estrogens are more or less hazardous than "synthetic" estrogens at equi-estrogenic doses.

2. ESTROGENS SHOULD NOT BE USED DURING PREGNANCY

The use of female sex hormones, both estrogens and progestogens, during early pregnancy may seriously damage the offspring. It has been shown that females exposed to utero to diethylstilbestrol, a nonsteroidal estrogen, have an increased risk of developing, in later life, a form of vaginal or cervical cancer that is ordinarily extremely rare. This risk has been estimated as not greater than 4 per 1,000 exposures. Furthermore, a high percentage of such exposed women (from 30% to 90%) have been found to have vaginal adenosis, epithelial changes of the vagina and cervix. Although these changes are histologically benign, it is not known whether they are precursors of malignancy. Although similar data are not available with the use of other estrogens, it cannot be presumed they would not induce similar changes. Several reports suggest an association between intrauterine exposure to female sex hormones and congenital anomalies, including congenital heart defects and limb-reduction defects. One case-controlled study estimated a 4.7-fold increased risk of limb-reduction defects in infants exposed in utero to sex hormones (oral contraceptives, hormone withdrawal tests for pregnancy, or attempted treatment for threatened abortion). Some of these exposures were very short and involved only a few days of treatment. The data suggest that the risk of limb-reduction defects in exposed fetuses is somewhat less than 1 per 1,000. In the past, female sex hormones have been used during pregnancy in an attempt to treat threatened or habitual abortion. There is considerable evidence that estrogens are ineffective for these indications, and there is no evidence from well-controlled studies that progestogens are effective for these uses. If PREMARIN is used during pregnancy, or if the patient becomes pregnant while taking this drug, she should be apprised of the potential risks to the fetus, and the advisability of pregnancy continuation.

DESCRIPTION: PREMARIN (conjugated estrogens, USP) contains a mixture of estrogens, obtained exclusively from natural sources, blended to represent the average composition of material derived from pregnant mares' urine. It contains estrone, equilin, and 17 α -dihydroequilin, together with smaller amounts of 17 α -estradiol, equilin, and 17 α -dihydroequilin as salts of their sulfate esters. Tablets are available in 0.3 mg, 0.625 mg, 0.9 mg, 1.25 mg, and 2.5 mg strengths of conjugated estrogens. Cream is available as 0.625 mg conjugated estrogens per gram.

INDICATIONS AND USAGE: PREMARIN (conjugated estrogens tablets, USP) Moderate-to-severe vasomotor symptoms associated with the menopause (There is no evidence that estrogens are effective for nervous symptoms or depression without associated vasomotor symptoms and they should not be used to treat such conditions.) Osteoporosis (abnormally low bone mass). Atrophic vaginitis. Kraurosis vulvae. Female castration.

PREMARIN (conjugated estrogens) Vaginal Cream is indicated in the treatment of atrophic vaginitis and kraurosis vulvae.

PREMARIN HAS NOT BEEN SHOWN TO BE EFFECTIVE FOR ANY PURPOSE DURING PREGNANCY AND ITS USE MAY CAUSE SEVERE HARM TO THE FETUS (SEE BOXED WARNING).

Concomitant Progestin Use: The lowest effective dose appropriate for the specific indication should be utilized. Studies of the addition of a progestin for 7 or more days of a cycle of estrogen administration have reported a lowered incidence of endometrial hyperplasia. Morphological and biochemical studies of the endometrium suggest that 10 to 13 days of progestin are needed to provide maximal maturation of the endometrium and to eliminate any hyperplastic changes. Whether this will provide protection from endometrial carcinoma has not been clearly established. There are possible additional risks which may be associated with the inclusion of progestin in estrogen replacement regimens. (See PRECAUTIONS.) The choice of progestin and dosage may be important; product labeling should be reviewed to minimize possible adverse effects.

CONTRAINDICATIONS: Estrogens should not be used in women (or men) with any of the following conditions:

1. Known or suspected cancer of the breast except in appropriately selected patients being treated for metastatic disease.
2. Known or suspected estrogen-dependent neoplasia.
3. Known or suspected pregnancy (see Boxed Warning).
4. Undiagnosed abnormal genital bleeding.
5. Active thrombophlebitis or thromboembolic disorders.
6. A past history of thrombophlebitis, thrombosis, or thromboembolic disorders associated with previous estrogen use (except when used in treatment of breast or prostatic malignancy).

WARNINGS: Estrogens have been reported to increase the risk of endometrial carcinoma (see Boxed Warning). However, a recent large, case-controlled study indicated no increase in risk of breast cancer in postmenopausal women. A recent study has reported a 2- to 3-fold increase in the risk of surgically confirmed gallbladder disease in women receiving postmenopausal estrogens.

Adverse effects of oral contraceptives may be expected at the larger doses of estrogen used to treat prostatic or breast cancer or postpartum breast engorgement; it has been shown that there is an increased risk of thrombosis in men receiving estrogens for prostatic cancer and women for postpartum breast engorgement. Users of oral contraceptives have an increased risk of diseases, such as thrombophlebitis, pulmonary embolism, stroke, and myocardial infarction. Cases of renal thrombosis, mesenteric thrombosis, and optic neuritis have been reported in oral contraceptive users. An increased risk of postsurgery thromboembolic complications has also been reported in users of oral contraceptives. If feasible, estrogen should be discontinued at least 4 weeks before surgery of the type associated with an increased risk of thromboembolism, or during periods of prolonged immobilization. Estrogens should not be used in persons with active thrombophlebitis, thromboembolic disorders, or in persons with a history of such disorders in association with estrogen use. They should be used with caution in patients with cerebral vascular or coronary artery disease. Large doses (5 mg conjugated estrogens per day), comparable to those used to treat cancer of the prostate and breast, have been shown to increase the risk of nonfatal myocardial infarction, pulmonary embolism, and thrombophlebitis. When doses of this size are used, any of the thromboembolic and thrombotic adverse effects should be considered a clear risk.

For atrophic vaginitis

PREMARIN® (conjugated estrogens)

Vaginal
Cream

0.625 mg/g



Benign hepatic adenomas should be considered in estrogen users having abdominal pain and tenderness, abdominal mass, or hypovolemic shock. Hepatocellular carcinoma has been reported in women taking estrogen-containing oral contraceptives. Increased blood pressure may occur with use of estrogens in the menopause and blood pressure should be monitored with estrogen use. A worsening of glucose tolerance has been observed in patients on estrogen-containing oral contraceptives. For this reason, diabetic patients should be carefully observed. Estrogens may lead to severe hypercalcemia in patients with breast cancer and bone metastases.

PRECAUTIONS: Physical examination and a complete medical and family history should be taken prior to the initiation of any estrogen therapy with special reference to blood pressure, breasts, abdomen, and pelvic organs, and should include a Papanicolaou smear. As a general rule, estrogen should not be prescribed for longer than one year without another physical examination being performed. Conditions influenced by fluid retention, such as asthma, epilepsy, migraine, and cardiac or renal dysfunction, require careful observation. Certain patients may develop manifestations of excessive estrogenic stimulation, such as abnormal or excessive uterine bleeding, mastodynia, etc. Prolonged administration of unopposed estrogen therapy has been reported to increase the risk of endometrial hyperplasia in some patients. Oral contraceptives appear to be associated with an increased incidence of mental depression. Patients with a history of depression should be carefully observed. Pre-existing uterine leiomyomata may increase in size during estrogen use. The pathologist should be advised of estrogen therapy when relevant specimens are submitted. If jaundice develops in any patient receiving estrogen, the medication should be discontinued while the cause is investigated. Estrogens should be used with care in patients with impaired liver function, renal insufficiency, metabolic bone diseases associated with hypercalcemia, or in young patients in whom bone growth is not yet complete. If concomitant progestin therapy is used, potential risks may include adverse effects on carbohydrate and lipid metabolism.

The following changes may be expected with larger doses of estrogen:

- a. Increased sulfobromophthalen retention.
- b. Increased prothrombin and factors VII, VIII, IX, and X, decreased antithrombin 3, increased norepinephrine-induced platelet aggregability.
- c. Increased thyroid binding globulin (TBG) leading to increased circulating fetal thyroid hormone, as measured by PBI, T_4 by column, or T_4 by radioimmunoassay. Free T_3 resin uptake is decreased, reflecting the elevated TBG, free T_4 concentration is unaltered.
- d. Impaired glucose tolerance.
- e. Decreased pregnanediol excretion.
- f. Reduced response to metyrapone test.
- g. Reduced serum folate concentration.
- h. Increased serum triglyceride and phospholipid concentration.

As a general principle, the administration of any drug to nursing mothers should be done only when clearly necessary since many drugs are excreted in human milk.

Long-term, continuous administration of natural and synthetic estrogens in certain animal species increases the frequency of carcinomas of the breast, cervix, vagina, and liver. However, in a recent, large case-controlled study of postmenopausal women there was no increase in risk of breast cancer with use of conjugated estrogens.

ADVERSE REACTIONS: The following have been reported with estrogenic therapy, including oral contraceptives: breakthrough bleeding, spotting, change in menstrual flow, dysmenorrhea, premenstrual-like syndrome, amenorrhea during and after treatment, increase in size of uterine fibromyomata, vaginal candidiasis, change in cervical erosion and in degree of cervical secretion, cystitis-like syndrome, tenderness, enlargement, secretion (of breasts), nausea, vomiting, abdominal cramps, bloating, cholestatic jaundice, chloasma or melasma which may persist when drug is discontinued, erythema multiforme, erythema nodosum, hemorrhagic eruption, loss of scalp hair, hirsutism, steepening of corneal curvature, intolerance to contact lenses: headache, migraine, dizziness, mental depression, chorea, increase or decrease in weight, reduced carbohydrate tolerance, aggravation of porphyria, edema; changes in libido.

ACUTE OVERDOSAGE: May cause nausea, and withdrawal bleeding may occur in females.

DOSEAGE AND ADMINISTRATION:

PREMARIN® Brand of conjugated estrogens tablets, USP

1. *Given cyclically for short-term use only.* For treatment of moderate-to-severe vasomotor symptoms, atrophic vaginitis, or kraurosis vulvae associated with the menopause (0.3 mg to 1.25 mg or more daily). The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible. Administration should be cyclic (eg, three weeks on and one week off). Attempts to discontinue or taper medication should be made at three- to six-month intervals.

2. *Given cyclically.* Osteoporosis. Female castration. Osteoporosis—0.625 mg daily. Administration should be cyclic (eg, three weeks on and one week off). Female castration—1.25 mg daily, cyclically. Adjust upward or downward according to response of the patient. For maintenance, adjust dosage to lowest level that will provide effective control.

Patients with an intact uterus should be monitored for signs of endometrial cancer and appropriate measures taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

PREMARIN® Brand of conjugated estrogens Vaginal Cream

Given cyclically for short-term use only. For treatment of atrophic vaginitis or kraurosis vulvae.

The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible.

Administration should be cyclic (eg, three weeks on and one week off).

Attempts to discontinue or taper medication should be made at three- to six-month intervals.

Usual dosage range: 2 g to 4 g daily, intravaginally, depending on the severity of the condition.

Treated patients with an intact uterus should be monitored closely for signs of endometrial cancer and appropriate diagnostic measures should be taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

References:

1. Lindsay R, Hart OM, Clark OM. The minimum effective dose of estrogen for prevention of postmenopausal bone loss. *Obstet Gynecol* 1984;63:759-763.
2. Studd JWW, Thom MH, Paterson MEL, et al: The prevention and treatment of endometrial pathology in postmenopausal women receiving exogenous estrogens, in Paoletti N, Paoletti R, Ambrus JL (eds): *The Menopause and Postmenopause*. Lancaster, England, MTP Press Ltd, 1980, chap 13.

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AABB public opinion survey found that nearly three-in-four (73%) of the 1,000 respondents in the United States had heard of the autologous donation process, and that 80% of those surveyed would prefer to use this option if faced with surgery. Endorsement of autologous transfusion by the American Medical Association in late 1986 received much attention from the lay press and educated physicians and the public about the availability of this

transfusion option. The AMA's Council on Scientific Affairs called it "the safest type of blood for transfusion. It also decreases the demand for banked blood and eliminates the risk of infection and alloimmunization from a transfusion."

Information about the AABB and the NABRC is available at the AABB National Office, 1117 North 19th Street, Suite 600, Arlington, VA 22209.

THINGS TO COME

OCTOBER 1-3

Schizophrenia and the Family: Integrating Psychoeducational and Family Therapy Approaches. October 1 and 2: Professionals workshop. October 3: Families workshop. Sponsored by the Menninger Foundation. Seeley Conference Center, Topeka, KS. Thirteen Category I credit hours. Fees: \$185. September 10 registration deadline. Advance registration required. Further information: Brenda Vink, Conference Coordinator, Division of Continuing Education, The Menninger Foundation, Box 829 Topeka, KS; (913) 273-7500, ext. 5991.

OCTOBER 14-18

American Society of Internal Medicine Annual Meeting. Sponsored by the American Society of Internal Medicine. J. W. Marriott Hotel, Washington, D.C. Fourteen hours Category I credit. For more information and registration materials, call (800) 338-ASIM or write to ASIM, 1101 Vermont Ave., Northwest, Suite 500, Washington, D.C. 20005.

OCTOBER 16-17

Bone Marrow Transplantation for Patients without Matched Donors. Sponsored by the University of Kentucky School of Medicine. Hyatt Regency Hotel, Lexington, KY. Approved for Category I credit. Further information: Joy Greene, Continuing Medical Education, 132 College of Medicine Office Building, University of Kentucky, Lexington, KY 40536, (606) 233-5161.

OCTOBER 23-24

An Overview of Geriatric Medicine and a Strategy for Geriatric Boards. Co-sponsored by the Tennessee Geriatrics Society, American Geriatrics Society, and American Medical Directors Association. Knoxville, TN. Twelve Category I credit hours. Further information: Dr. James A. Greene or Diane Burkett, Center for Health & Creative Aging,

9330 Park West Blvd., Suite 502, Knoxville, TN 37923; (615) 694-0076.

OCTOBER 2-25

Management of Infectious Diseases. Co-sponsored by The Arkansas Children's Hospital and the University of Arkansas for Medical Sciences. Camino Real Hotel, Puerto Vallarta, Mexico. Twelve Category I credit hours. Registration fees: \$250 per person. For further information about travel accommodations and registration: Blanche Moore, Continuing Education Director, Arkansas Children's Hospital, 800 Marshall, Little Rock, AR 72202, (501) 370-1481.

OCTOBER 25-30

Eighteenth Family Medicine Review - Session III. Sponsored by the University of Kentucky College of Medicine. Hyatt Regency Hotel, Lexington, KY. Approved for Category I credit. Further information: Joy Greene, Continuing Medical Education, 132 College of Medicine Office Building, UK, Lexington, KY 40536, (606) 233-5161.

OCTOBER 26-31

Thirty-Eighth Annual Workshops and Scientific Program of the Society for Clinical and Experimental Hypnosis. Co-sponsored by University of California and the University of Southern California. Ambassador Garden Hotel, Los Angeles, CA. Forty-six Category I credit hours. Further information: Marion Kenn, Administrative Director, SCEH, 128A Kings Park Drive, Liverpool, NY 13090.

OCTOBER 27-31

Non-Invasive Vascular Diagnosis by Doppler Ultrasound. Sponsored by the Institute for Medical Studies. Houston, TX. Up to 30 hours Category I credit. Further information: Lisa Krehbiel, Institute for Medical Studies, 30131 Town Center Dr., Suite 215, Laguna Niguel, CA 92677, (714) 495-4499.

NOVEMBER 5-6

Advanced Applied Ultrasound in Obstetrics Seminar.

Sponsored by the Center for Medical Ultrasound, Bowman Gray School of Medicine. Registry Resort Hotel, Naples, Florida. 12 hours Category I credit. Fee: \$375. Further information: Registrar, Ultrasound Center, Bowman Gray School of Medicine, 300 S. Hawthorne, Winston-Salem, NC 27103, (919) 748-4505.

NOVEMBER 30-DECEMBER 6

Fourth Annual Doppler and 2-D Echocardiography Seminar. Sponsored by the Institute for Medical Studies. San Francisco, California. Up to forty hours Category I credit available. Further information: Lisa Krehbiel, 30131 Town Center Drive, Suite 215, Laguna Niguel, California 92677, (714) 495-4499.

From the AMA Surveys of Physician and Public Opinion on Health Care Issues 1987...

Do you feel that children with AIDS should or should not be allowed to attend regular school classes?

Physician Opinion 1987

Should be allowed to attend	78%
Should not be allowed to attend	8%
Unsure	14%

Public Opinion 1987

Should be allowed to attend	57%
Should not be allowed to attend	23%
Unsure	20%

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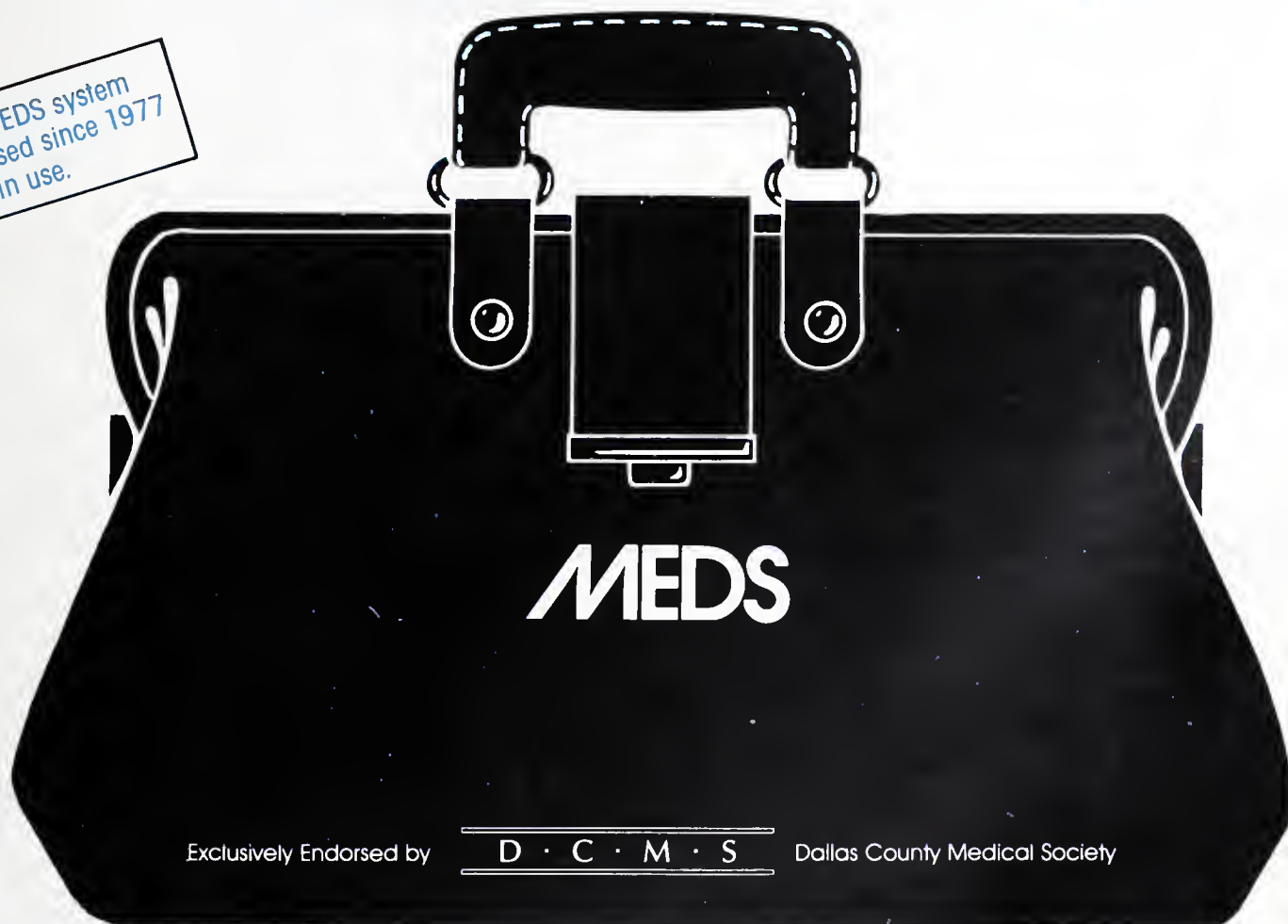
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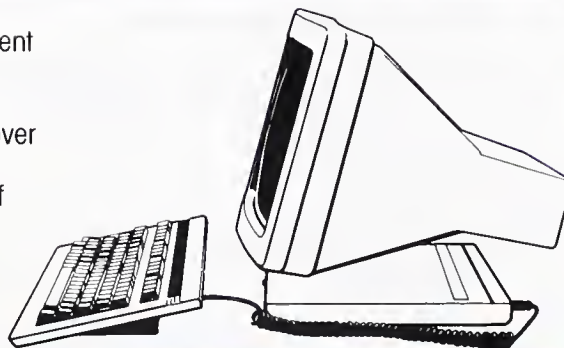
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KEEPING UP

Primary Care and "Pigskin"

September 26, 8:00 a.m. - 12:30 p.m. Sponsored by Memorial Hospital, North Little Rock. Memorial Hospital, North Little Rock. Category I credit available. For further information contact: Mrs. Anita Moore, Medical Staff Secretary, 771-3452.

Treatment of Acute Chemical Exposure

September 26. Presented by George Wood, M.D. Sponsored by Baptist Medical Center. BMC Shuffield Auditorium. For further information contact: BMC's Medical Education Department, (501) 227-2672.

Pulling the Plug

September 29, 12:30 p.m. Presented by Russell Williams, MSW. Sponsored by AHEC Fort Smith. Sparks Regional Medical Center. One Category I credit hour.

Therapeutic Drug Classes

September 30, 12:30 p.m. Presented by Charles C. Marsh, Pharm.D. Sponsored by AHEC Fort Smith. Sparks Regional Medical Center. One Category I credit hour.

Pediatric Update '87

October 3, 8:30 a.m. - 4:15 p.m. Sponsored by Arkansas Children's Hospital and UAMS Department of Pediatrics. Sturgis Building, Little Rock. Five Category I credit hours. Fee: \$50. Further information: Blanche Moore, Arkansas Children's Hospital, 800 Marshall, Little Rock, AR 72202, (501) 370-1481.

Arkansas Foundation for Medical Care Seminar

October 8, 8:30 a.m. - 5:00 p.m. and October 9, 9:00 a.m. - 12 noon and 1:00 p.m. - 3:00 p.m. Presented by the Arkansas Foundation for Medical Care, Inc. October 8 will be primarily for medical records personnel and/or DRG coordinators. October 9 will be for physician advisors to the AFMC or other interested physicians. Registration deadline is October 1. Registration fee: \$25 for physicians; hospital personnel, \$100 for first person, \$75 each person thereafter. Further information: Stella

Bucknam, AFMC Central Office, Post Office Box 1508, Fort Smith, AR 72902, (501) 785-2471.

Cancer Management Course

October 9 and 10, 7:30 a.m. - 4:30 p.m.. Presented by Nicholas P. Lang, M.D. and James H. Bledsoe, M.D. Sponsored by the American College of Surgeons and the UAMS Office of Continuing Education for Physicians. UAMS Education Building, Room 8121, Little Rock. Thirteen hours of Category I credit. Fee: \$250.

Psychiatry Update '87

October 10 and October 11, times to be announced. Presented by G. Richard Smith, M.D., and R. Bronson Stilwell, M.D. Sponsored by the UAMS Office of Continuing Education for Physicians. Fayetteville Hilton, Fayetteville. Ten hours Category I credit. Fee: \$115.00.

Genetics Conference

October 15, 12:00 noon. Presented by Judith Rannels. Sponsored by AHEC- Fort Smith. Sparks Regional Medical Center. One Category I credit hour.

Arkansas Orthopaedic Society Fall Meeting

October 16-17, 6:00 p.m. Presented by Harry Ward, M.D.; Asa Crow, M.D.; Roger Busfield, M.D.; Mr. Ray Scott; and Ms. Carol Rasco. Sponsored by the Arkansas Orthopaedic Society. Capital Hotel, Little Rock. Category I credit available. Further information about fees and hotel arrangements: Arkansas Medical Society Specialty Desk, #10 Corporate Hill Drive, Little Rock, AR 72215, (501) 224-8967 or 1 (800) 542-1058 (outside Little Rock).

Management of Infectious Diseases

October 20-25. Sponsored by the Arkansas Children's Hospital. Puerto Vallarta, Camino Real Hotel. Twelve hours Category I credit. Further information on fees and travel arrangements: Blanche Moore, Continuing Education Director, Arkansas Children's Hospital, 800 Marshall, Little Rock, AR 72202, (501) 375-6427.

Helping the Post MI Patient

October 22, 12:30 p.m. Presented by Russell Williams, MSW. Sponsored by the AHEC Fort Smith.

Sparks Regional Medical Center. One hour Category one credit.

Primary Care Update

October 22 and October 23. Sponsored by the Baptist Medical Center. Little Rock Hilton Inn. For further information contact: Baptist Medical Center, Medical Education Department, (501) 227-2672.

Hypertensive Drugs

October 28, 12:30 p.m. Presented by Charles C. Marsh, Pharm.D. Sponsored by AHEC Fort Smith. Sparks Regional Medical Center. One hour Category I credit.

Infectious Diseases in Children

November 17, 12:00 noon. Presented by Russell Steele, M.D. Sponsored by AHEC - Fort Smith. Sparks Regional Medical Center, Fort Smith. One Category I credit hour.

Fourth Annual Conference on Perinatal Care

November 19-20, 7:30 a.m. - 5:00 p.m. Presented by Frank C. Miller, M.D., Julie West, R.N.C., and Julie Roberts, R.N.P. Sponsored by the University of Arkansas College of Medicine. Great Hall, Camplot Hotel, Little Rock. Twelve and one-half Category I credit hours. Fee: \$75.00.

Recurring Education Programs

EL DORADO - AHEC

- Behavioral Sciences Conference*, first and fourth Friday, 12:15 p.m., AHEC - South Arkansas.
- Chest Conference*, third Wednesday, 12:30 p.m., Wamer Brown Hospital
- Fracture Conference*, third Tuesday, 12:15 p.m., AHEC-South Arkansas
- Gynecology-Pathology Conference*, second Friday, 12:15 p.m., AHEC-South Arkansas
- Internal Medicine Conference*, first, second and fourth Wednesday, 12:15 p.m., AHEC-South Arkansas
- Pathology Conference*, second Tuesday, 12:15 p.m., AHEC-South Arkansas
- Pharmacology Conference*, second Thursday, 12:15 p.m., AHEC-South Arkansas
- Obstetrics-Gynecology Conference*, fourth Thursday, 12:15 p.m., AHEC-South Arkansas
- Surgical Conference*, first, second and third Monday, 12:15 p.m., AHEC-South Arkansas
- Tumor Clinic*, fourth Tuesday, 12:15 p.m., AHEC-South Arkansas

FAYETTEVILLE - AHEC NORTHWEST

- City Hospital Staff Meeting*, second Friday, 12:00 noon, Fayetteville City Hospital
- Medicine Teaching Conference*, first, third and fifth Friday, 7:30 a.m., Baker Conference Room, Washington Regional Medical Center
- Nephrology Lecture Series*, fourth Thursday, 12:30 p.m., AHEC.
- Rheumatology Lecture Series*, first Tuesday, 12:30 p.m., VA Medical Center.

FAYETTEVILLE - VA MEDICAL CENTER

- Medical Conferences* (varying topics), each Wednesday, 12:15 p.m., Conference Room Building 1, VAMC
- Pathology/Mortality Conference*, each Friday, 12:30 p.m., Conference Room, Building 1, VAMC

FORT SMITH-AHEC

- Cardiology Conference*, first Wednesday, 12:00 noon, Sparks Regional Medical Center
- Family Practice Conference*, third Wednesday, 12:00 noon, Sparks Regional Medical Center
- Neurology Conference*, second Thursday, 12:00 noon, Sparks Regional Medical Center

HOT SPRINGS-AMI NATIONAL PARK MEDICAL CENTER

- Continuing Medical Education Luncheon* for Medical/Dental Staff, varying topics, second and fourth Friday, 12:30 p.m., Classrooms, AMI National Park Medical Center

JONESBORO-AHEC NORTHEAST

- AHEC Lecture Series*, first and third Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Annex Building
- Arkansas Methodist Hospital CME Conference*, last Friday, 7:00 a.m., Arkansas Methodist Hospital, Paragould
- Cherokee Village Tumor Conference*, third Monday, 6:00 p.m., Ozark Baptist Memorial Hospital, Cherokee Village, every four months.
- Chest Conference*, fourth Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room
- Independence County Medical Society*, second Tuesday, 7:30 p.m., White River Medical Center, Batesville
- Interesting Case Conference*, second and fifth Tuesday, when applicable, 12:00 noon, St. Bernard's Dietary Conference Room
- Kennett Tumor Conference*, second Tuesday (every other month), Twin Rivers Regional Medical Center, Kennett, Mo.
- Methodist Hospital of Jonesboro CME Staff Conference*, second Tuesday, 7:30 p.m., Cafeteria, Methodist Hospital of Jonesboro
- Monthly Medical Lecture Series*, third Tuesday, 7:30 p.m., rotates each month between Walnut Ridge and Pocahontas
- Newport Tumor Conference*, second Wednesday, 12:00 noon, rotates each month between Harris Clinic and Newport Hospital
- Perinatal Conference*, second Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room

Bluff Tumor Conference, third Wednesday, 12:00 noon, Piggott Hospital, every four months.
Poplar Bluff Tumor Conference, third Wednesday, 12:00 noon, Lucy Lee Hospital, Poplar Bluff.
St. Bernard's Tumor Conference, fourth Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Wynne Tumor Conference, third Monday, 6:00 p.m., Grecian Steak House, Wynne, every four months.

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Alternating Sub-Specialty Conference, third Wednesday, 12:00 noon, Second Floor Classroom
General Pediatrics Seminar, first and third Friday, 12:00 noon, Second Floor Classroom
Genetics Conference, each Wednesday, 12:00 noon, Sturgis Building, Room 457
Infectious Disease Conference, second Wednesday, 12:00 noon, Sturgis Building, Room 121
Pediatric Grand Rounds, each Tuesday, 8:00 a.m., Sturgis Building, Auditorium
Pediatric Neuropsychiatry Conference, second Wednesday, 1:30 p.m., Polly R. Thomas Conference Room
Pediatric Neuroscience Conference, first Thursday, 8:00 a.m., Second Floor Classroom
Pediatric Pathology Conference, first Wednesday, 12:00 noon, Second Floor Classroom
Pediatric Pharmacology Conference, fifth Wednesday when applicable, 12:00 noon, Second Floor Classroom
Pediatric Radiology Conference, first and third Thursday, 12:00 noon, Second Floor Classroom
Pediatric Research Conference, third Monday, 12:00 noon, Second Floor Classroom
Problem Case Conference, second and fourth Friday, 12:00 noon, Second Floor Classroom

LITTLE ROCK-ST. VINCENT INFIRMARY

Cancer Conference, first Wednesday, 12:00 noon, CARTI Auditorium. A meal is provided.
Cancer Conference, third and fourth Thursday, 12:00 noon, Room S1174K, Lab. A meal is provided.
General Medicine Journal Club, each Tuesday, 12:00 noon, Medical Affairs Conference Room. Bring your lunch.
Hematology-Oncology Conference, second Thursday, 12:00 noon, Laboratory Library. A meal is provided.
Interhospital Urology Grand Rounds, first Tuesday, 5:30 p.m., Classroom 1, Education Wing. Refreshments are provided.
Neuropathology Conference, third Tuesday, 5:00 p.m., Room S1174K, Laboratory. Refreshments are provided.
Pediatric Conference, first Tuesday, 12:30 p.m., Classroom I, Education Wing. A meal is provided.
Peripheral Vascular Disease Conference, third Tuesday, 6:00 p.m., Classroom 1, Education Wing. A meal is provided.
Pulmonary Conference, second and fourth Wednesday, 12:00 noon, Classroom 1, Education Wing. A meal is provided.

LITTLE ROCK-UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

ACRC/CARTI Tumor Conference, each Wednesday, 12:00 noon, CARTI, Markham & University
ACRC Oncology Forum, fourth Thursday, 4:00 p.m., UAMS Education Building, Room G137
Anesthesia Lecture Series, each Wednesday and Thursday, 4:00 p.m., UAMS Education Building, Room G/110 A&B
Anesthesia Morbidity and Mortality Conference, each Tuesday, 6:45 a.m. (Wednesday afternoon only during last week of the month at 4:00 p.m.), UAMS Education Building, Room G/110 A&B
Interdisciplinary Gynecologic Cancer Conference, each Friday, 12:30 p.m., UAMS Education Building, Room G106 A&B
Medicine Grand Rounds, each Thursday, 12:15 p.m., UAMS Shorey Auditorium.
Medicine Research Conference, each Tuesday, 8:00 a.m., UAMS Shorey Building Room 8/105
Neurology Clinical Case Conference, three Thursdays per month, 8:00 a.m. Rotates between UAMS (7B33) and LRVAMC (3S) and ACH.
Neuropathology Conference, every Tuesday, 4:00 p.m. Rotates between UAMS (Shorey Building, 4th floor) and LRVAMC (Autopsy Room).
Neuroscience Conference (Basic), second, third, and fourth Monday, 8:00 a.m., UAMS 7B33.
Ob/Gyn Grand Rounds, each Wednesday, 7:30 a.m., UAMS Education Building, Room G/131B
Ophthalmology Problem Case Conference, each Thursday, 4:00 p.m., UAMS AAC Eye Clinic, Room 3/150.
Orthopaedic Basic Science Conference, each Tuesday, 11:00 a.m., UAMS Education Building, Room B/135
Orthopaedic Bibliography Conference, each Tuesday, 8:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Fracture Conference, each Tuesday, 7:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Grand Rounds, each Tuesday, 10:00 a.m., UAMS Education Building, Room B/135
Psychiatry Grand Rounds, each Friday, 11:00 a.m., UAMS Shorey Auditorium
St. Vincent Urology Grand Rounds, first Tuesday, 5:30 p.m., St. Vincent Infirmary, Education Building Room 159
Surgery Grand Rounds, each Saturday, 9:00 a.m., UAMS Education Building, Room G/131
Surgical Science Conference, each Saturday, 8:00 a.m., UAMS Education Building Room G/131
Urologic Topics, once or twice monthly, 5:00 p.m., UAMS
Urology Grand Rounds, twice monthly, 5:00 p.m., VAMC
Urology Morbidity and Mortality Workshop, last Wednesday, UAMS
Uro-Radiology Workshop, first Thursday, 5:00 p.m., UAMS
VA Medical Service Teaching Conference, each Thursday, 8:00 a.m., NLRVA, Building 66, Room 38
VA Research Methods Conference, first Wednesday, 12:00 noon, VAMC, Room 1E122
VA Surgery Grand Rounds, each Thursday, 12:45 p.m., VAMC, Room 2D109
VA Topics in Rehabilitation Medicine, each Thursday, 7:45 a.m., NLRVA Conference Room, Building 89L
VA Weekly Cancer Conference (Surgical Service), each Tuesday, 1:00 p.m., VAMC, Room 2D109

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, third Thursday, 7:00 a.m., Conference Room 1
Emergency Medicine Board Review, second Thursday, 6:00 p.m., Third Floor Conference Room, Doctor's Park Building.
Grand Rounds Conference, each Wednesday, 12:00 noon, Conference Room 1. Lectures and Case Presentations. A light lunch will be served.
Pathology Conference, third Tuesday, 3:00 p.m., Pathology Library. Case Presentations.
Pulmonary Conference, each Tuesday, 12:00 noon, Shuffield Auditorium. Lunch served for \$1.75.
Surgery Conference, each Thursday, 7:30 a.m., Shuffield Auditorium. Lectures and Case Presentations.

PINE BLUFF-AHEC

Behavioral Science Conference, each Thursday, 12:30 p.m., Jefferson Regional Medical Center
Chest Conference, second and fourth Friday, 12:30 p.m., Jefferson Regional Medical Center
Family Practice Conference, fourth Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Internal Medicine Conference, second and fourth Wednesday, 12:30 p.m., Jefferson Regional Medical Center
Obstetrics/Gynecology Conference, second Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Pediatric Conference, third Wednesday, 12:30 p.m., Jefferson Regional Medical Center
Radiology Conference, third Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Southeast Arkansas Medical Lecture Series, third Tuesday, 6:30 p.m., Rosswood County Club. Dinner meeting.
Sub-Specialty Conference, first Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Surgery Conference, first Wednesday, 12:30 p.m., Jefferson Regional Medical Center

TEXARKANA-AHEC

Chest Conference, third Wednesday, 12:30 p.m., St. Michael Hospital
Tumor Conference, first Wednesday, 7:00 a.m., St. Michael Hospital

As organizations accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the organizations named certify that these continuing medical education activities meet the criteria for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

NEW MEMBERS

BOONE COUNTY MEDICAL SOCIETY

LESLIE, THOMAS S., Family Practice, Harrison. Born February 6, 1951, Batesville. Pre-medical education, State College of Arkansas, B.S., 1973 and University of Arkansas, graduate work. Medical education, University of Arkansas for Medical Sciences, 1979. Internship, UAMS program, Little Rock. Previous practice, Harrison, 7 years.

CARROLL COUNTY MEDICAL SOCIETY

BEARD, CHARLES A., Internal Medicine, Eureka Springs. Born August 30, 1951, Wichita, Kansas. Pre-medical education, Wichita State University, B.S., 1973. Medical education, University of Kansas, 1977. Internship and Residency, Tuscon Hospital Medical Education Program. Previous practice, 5 years, Sterling, CO. Board certified.

CRAIGHEAD COUNTY MEDICAL SOCIETY

HERMAN, BARRY K., Child Psychiatry, Jonesboro. Born June 4, 1950, Hartford, CT. Pre-medical education, Clark University, Worcester, MA, B.A., 1974. Medical education, Tufts University, Boston, MA, 1980. Internship, Santa Barbara Cottage Hospital, Santa Barbara, CA. Residency, Herrick Hospital and Health Center, Berkeley, CA. Fellowship, Children's Hospital at Stanford, Palo Alto, CA. Previous practice, 1 year. Teaching appointments, Assistant Clinical Professor, Department of Psychiatry, UAMS. Board certified, psychiatry. Member, APA, AACAP, Arkansas Psychiatry Society.

CRITTENDEN COUNTY MEDICAL SOCIETY

BRYANT JR., GLEN E., Ophthalmology, West Memphis. Born November 12, 1952, Helena. Pre-medical education, University of Arkansas at Fayetteville, B.A., 1976. Medical education, University of Arkansas for Medical Sciences, 1980. Internship and Residency, University of Tennessee program, Methodist Hospitals. Previous practice, West Memphis, 2 years. Board certified. Member, American Academy of Ophthalmology.

SCHOETTLE, STEVE P., Surgery, West Memphis. Born August 10, 1955, West Memphis. Pre-medical education, Vanderbilt University, B.S., 1977. Medical education, University of Arkansas for Medical Sciences, 1981. Internship and Residency, Baylor University Medical Center, Dallas, TX. Practice experience, 1 year, West Memphis. Board certified, Surgery.

FAULKNER COUNTY MEDICAL SOCIETY

ROOK, ROBERT B., Family Practice, Conway. Born May 30, 1956, Conway. Pre-medical education, University of Arkansas and University of Central Arkansas, B.S., 1978. Medical education, University of Arkansas for Medical Sciences, 1982. Residency, Family Practice, AHEC, Fort Smith. Practice experience, 2 years, Conway. Board certified, Family Practice. Member, AAFP.

SHIRLEY, DAVID C., Urology, Conway. Born November 23, 1956, Tulsa, OK. Pre-medical education, University of Oklahoma, B.S., 1978. Medical education, University of Oklahoma, 1982. Internship and Residency, University of Missouri, Columbia. Board eligible.

INDEPENDENCE COUNTY MEDICAL SOCIETY

WALDRIP III, WILLIAM J., Family Practice, Batesville. Born September 3, 1954, Batesville. Pre-medical education, Arkansas College, B.A., 1976 and Arkansas State University, M.S., 1978. Medical education, University of Arkansas for Medical Sciences, 1984. Internship, St. Bernard's Regional Medical Center, Jonesboro. Residency, Family Practice, St. Bernard's Regional Medical Center. Board eligible. Member, AAFP.

LEE COUNTY MEDICAL SOCIETY

BALKE, SUSAN W., General Practice, Marianna. Born July 5, 1951, Stevens Point, WI. Pre-medical education, Marquette University, B.S., 1973. Medical education, University of Alabama, Birmingham, AL and University of Health Sciences College of Osteopathic Medicine, Kansas City, MO, 1983. Internship, Eisenhower Hospital, Colorado Springs, CO.

PULASKI COUNTY MEDICAL SOCIETY

BREWER, ROBERT M., Rheumatology/Internal Medicine, Little Rock. Born August 24, 1950, Fayetteville, NC. Pre-medical education, Wake Forest University, Winston-Salem, NC, B.S., 1972. Medical education, Medical College of Virginia, Richmond, VA, 1987. Internship and Residency, Brooke Army Medical Center, San Antonio, TX, Internal Medicine. Fellowship, Walter Reed Army Medical Center, Washington, D.C., Rheumatology. Previous Practice, Arlington, TX, 1986-87; Brooke Army Medical Center, San Antonio, TX, 1984-86; Walter Reed Army Medical Center, Washington, DC, 1982-84; Munson Army Hospital, Fort Leavenworth, KS, 1980-82; and Brooke Army Medical Center, 1977-80. Board certified, Internal Medicine and Rheumatology.

CHESSER, MICHAEL Z., Neurology, North Little Rock. Born April 13, 1955, Hot Springs. Pre-medical education, Ouachita Baptist University, B.S., 1977. Medical education, University of Arkansas for Medical Sciences, 1981. Internship and Residency, UAMS and U. S. Navy, Port Heunene Naval Medical Center, CA. Board eligible.

DIXON, KEITH A., Nephrology, North Little Rock. Born March 16, 1955, Harvey, LA. Pre-medical education, Louisiana State University, Baton Rouge, B.A., 1977. Medical education, LSU, Shreveport, 1982. Internship and Residencies, LSU Shreveport (medicine and internal medicine) and UAMS. Board eligible.

GREER, GERALD S., Cardiology/Electrophysiology, Little Rock. Born December 22, 1955, Camden. Pre-medical education, University of Arkansas, Little Rock,

B.S., 1977. Medical education, University of Arkansas for Medical Sciences, 1981. Internship and Residency, UAMS and Duke University, Durham, NC. Board certified, Internal Medicine.

MOONEY, DONALD K., Urology, North Little Rock. Born November 16, 1955, Clarksville. Pre-medical education, Hendrix College, B.A., 1978. Medical education, University of Arkansas for Medical Sciences, 1982. Internship and Residency, UAMS Program, Little Rock.

PARKER, PAMELA E., Psychiatry, Little Rock. Born July 20, 1951, Atlanta, GA. Pre-medical education, Converse College, Spartanburg, SC, 1973. Medical education, University of Alabama, Birmingham, 1982. Internship and Residency, University of Alabama, Birmingham. Board eligible, Psychiatry and Neurology.

PHILLIPS-JEFFERS, ROBIN J., Family Practice, Little Rock. Born September 3, 1958, Pine Bluff. Pre-medical education, Northwestern University, Evanston, IL and University of Arkansas at Pine Bluff, 1980. Medical education, University of Arkansas for Medical Sciences, 1984. Internship and Residency, UAMS.

WESTENDORP, FLOYD, Psychiatry, North Little Rock. Born March 2, 1932, Jenison, MI. Pre-medical education, Calvin College, Grand Rapids, MI, A.B., 1953. Medical education, University of Michigan, Ann Arbor, 1957. Internship, St. Mary's, Duluth, MN. Residency, University of Minnesota, Minneapolis, MN. Previous practice, Pine Rest Christian Hospital, 1961-69; Ottawa County Community Mental Health Center, 1969-74; and Michigan State University, 1974-86.

SEBASTIAN COUNTY MEDICAL SOCIETY

McCHRISTIAN, JIMMY W., Anesthesia, Fort Smith. Born November 29, 1952, Ozark. Pre-medical education, University of Central Arkansas, B.S., 1974. Medical education, University of Arkansas for Medical Sciences, 1979. Internship, Brooke Army Medical Center, San Antonio, TX. Residency, Letterman Army Medical Center Program, San Francisco, CA. Military record, U. S. Army, 1979-1986. Practice experience, U. S. Army 1980-1986 (not including residency). Board certified, Anesthesiology. Member, ASA.

VAN BUREN MEDICAL SOCIETY

TAHIR, SYED Z., General Surgery, Clinton. Born December 5, 1951, Rampur, India. Pre-medical education, Lucknow University, India, 1969. Medical education, King George's Medical College, Lucknow University, India, 1973. Internship, Worchester City Hospital. Residency, Sacred Heart Hospital. Previous practice, 7 years. Board certified, General Surgery. Fellow, American College of Surgeons.

IN MEMORIAM

DR. WALTER SHRINER

Dr. Walter Shriner, 74, of Springfield, IL, formerly of Hot Springs Village, died Thursday, June 25, in Springfield. He was a gerontologist.

Dr. Shriner received his medical degree from the University of Illinois and was a fellow of the International College of Surgeons. Dr. Shriner was a life member of the Garland County Medical Society and the Arkansas Medical Society as well as a member of the American Medical Association.

Dr. Shriner is survived by his wife, Ruth Shriner; one daughter, Anne Swettman of Pleasant Plains, IL, two grandchildren and one great-grandson.

DR. GEORGE T. McPHAIL

George T. McPhail, a Forrest City family practitioner, died Monday, August 3, 1987. He was 79.

Dr. McPhail received his medical degree from the University of Tennessee for Health Sciences in 1938. He was a veteran of World War II and a Mason as well as being a lifetime member of the Arkansas Medical Society and the St. Francis County Medical Society.

Survivors are his wife, Mrs. Martha McPhail; three daughters, Dr. Mary Ellen McPhail of Little Rock, and Ms. Frances McPhail and Mrs. Lula Bell Buford, both of Forrest City; a brother, D. H. McPhail of Slate Springs, MS; two grandchildren and a great-grandchild.

RESOLUTIONS

WHEREAS, the membership of the Pulaski County Medical Society notes with sincere sorrow the recent death of an esteemed colleague, K. M. Kreth, M.D.; and

WHEREAS, he had been a valued member of this Society for thirty-two years and had earned the respect of his fellow physicians for his knowledge and devotion to his chosen speciality of obstetrics-gynecology; and

WHEREAS, Dr. Kreth was held in high esteem by his patients and by the citizens of the community; therefore be it

RESOLVED, that this resolution be adopted and made a part of the permanent records of the Society; and

RESOLVED, that a copy be sent to Dr. Kreth's family to convey our deepest sympathy; and

RESOLVED, that a copy be made available to *The Journal of the Arkansas Medical Society* for publication.

By Order of the Memorials
Committee

Adopted Unanimously
Executive Committee
August 19, 1987

John D. Pike, M.D., Chairman
Robert Watson, M.D.
Henry Hollenberg, M.D.

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Many physicians would like to devote some time to their country in a local Army Reserve unit. We know that making a weekend commitment can be difficult for most physicians. So it is practical for the Army Reserve units to be flexible about time. It's worth discussing.

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The Army Reserve understands the time demands on a busy physician, so you can count on us to be totally flexible in making time for you to share your specialty with your country. We'll arrange your training program to work with your practice.

To find out about the benefits of serving with a nearby Army Reserve unit, we recommend you call our Army Medical Personnel Counselor.

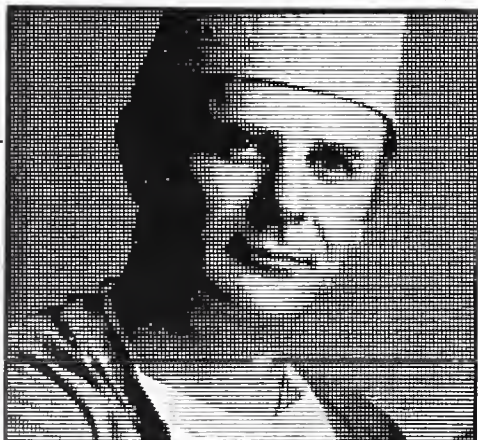
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One, time. We know how tough it is for a busy physician to make weekend time commitments. So we offer flexible training programs that allow a physician to share some time with his or her country. We arrange a schedule to suit your requirements.

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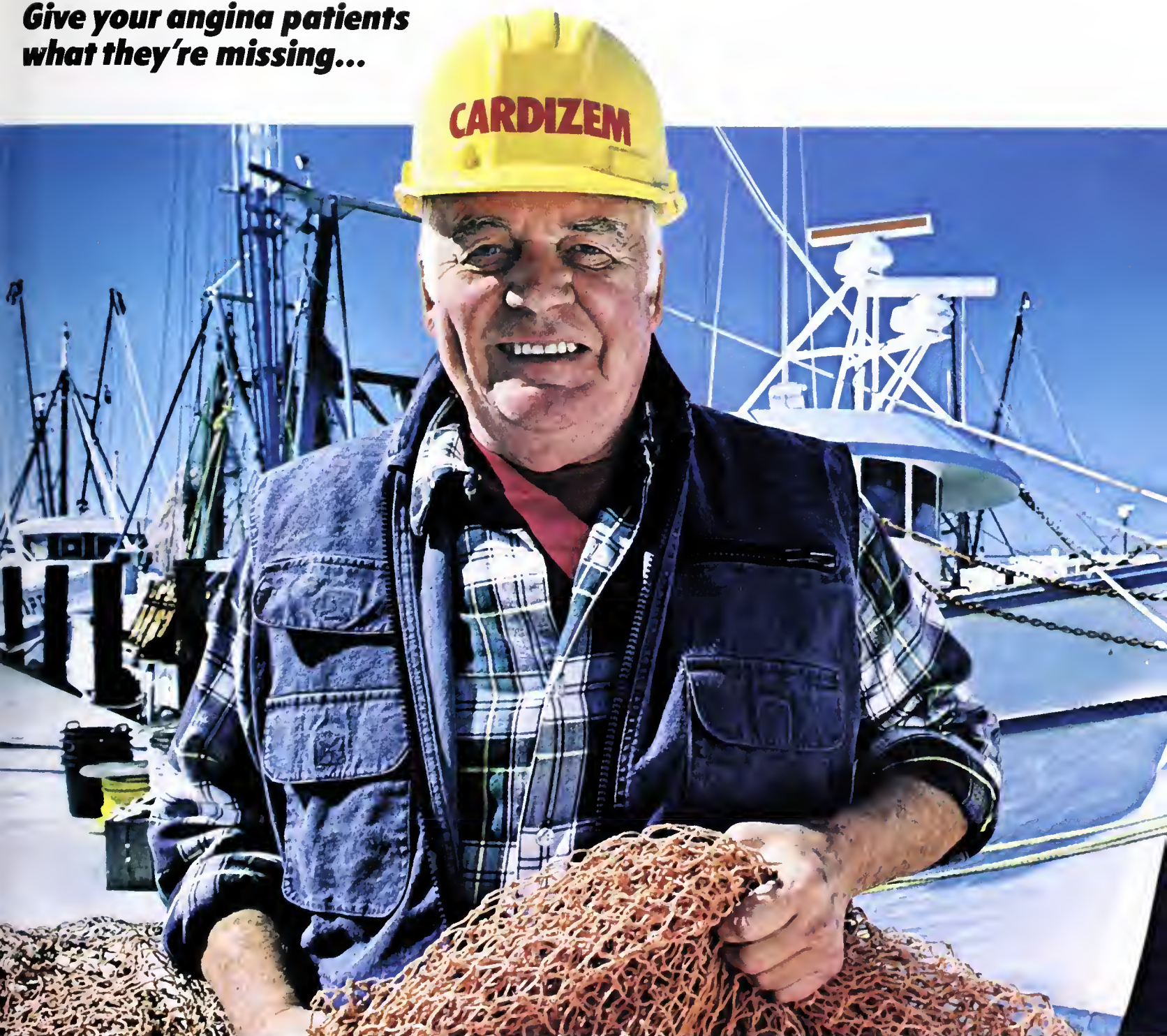
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Brief Summary Professional Use Information

CARDIZEM[®]
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30 mg, 60 mg, 90 mg, and 120 mg Tablets

CONTRAINDICATIONS

CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

- Cardiac Conduction.** CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1,243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.
- Congestive Heart Failure.** Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt). Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
- Hypotension.** Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.
- Acute Hepatic Injury.** In rare instances, significant elevations in enzymes such as alkaline phosphatase, CPK, LDH, SGOT, SGPT, and other symptoms consistent with acute hepatic injury have been noted. These reactions have been reversible upon discontinuation of drug therapy. The relationship to CARDIZEM is uncertain in most cases, but probable in some. (See PRECAUTIONS.)

PRECAUTIONS

General. CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic

function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.

Drug Interaction. Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in *in vitro* bacterial tests. No intrinsic effect on fertility was observed in rats.

Pregnancy. Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration at doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryonic and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.

There are no well-controlled studies in pregnant women, therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. Diltiazem is excreted in human milk. One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably asso-

ciated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences as well as their frequency of presentation are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%). In addition, the following events were reported infrequently (less than 1%):

Cardiovascular:	Angina, arrhythmia, AV block (first degree), AV block (second or third degree — see conduction warning), bradycardia, congestive heart failure, flushing, hypotension, palpitations, syncope.
Nervous System:	Amnesia, gait abnormality, hallucinations, insomnia, nervousness, paresthesia, personality change, somnolence, tinnitus, tremor.
Gastrointestinal:	Anorexia, constipation, diarrhea, dysgeusia, dyspepsia, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH (see hepatic warnings), vomiting, weight increase.
Dermatologic:	Petechiae, pruritus, photosensitivity, urticaria.
Other:	Amblyopia, dyspnea, epistaxis, eye irritation, hyperglycemia, nasal congestion, nocturia, osteoarticular pain, polyuria, sexual difficulties.

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: alopecia, gingival hyperplasia, erythema multiforme, and leukopenia. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established.

Issued 9/86

See complete Professional Use Information before prescribing.

References: 1. Pepine CJ, Feldman RL, Hill JA, et al: Clinical outcome after treatment of rest angina with calcium blockers: Comparative experience during the initial year of therapy with diltiazem, nifedipine, and verapamil. *Am Heart J* 1983; 106(6):1341-1347. 2. Shapiro W: Calcium channel blockers: Actions on the heart and uses in ischemic heart disease. *Consultant* 1984;24(Dec):150-159. 3. Johnston DL, Lesaway R, Humen DP, et al: Clinical and hemodynamic evaluation of propranolol in combination with verapamil, nifedipine and diltiazem in exertional angina pectoris: A placebo-controlled, double-blind, randomized, crossover study. *Am J Cardiol* 1985;55:680-687. 4. Cahn PF, Braunwald E: Chronic ischemic heart disease. In Braunwald E (ed): *Heart Disease: A Textbook of Cardiovascular Medicine*, ed 2. Philadelphia, WB Saunders Co, 1984, chap 39. 5. Schroeder JS: Calcium and beta blockers in ischemic heart disease: When to use which. *Mod Med* 1982;50(Sept):94-116.

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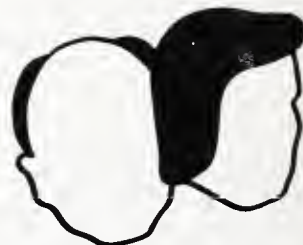
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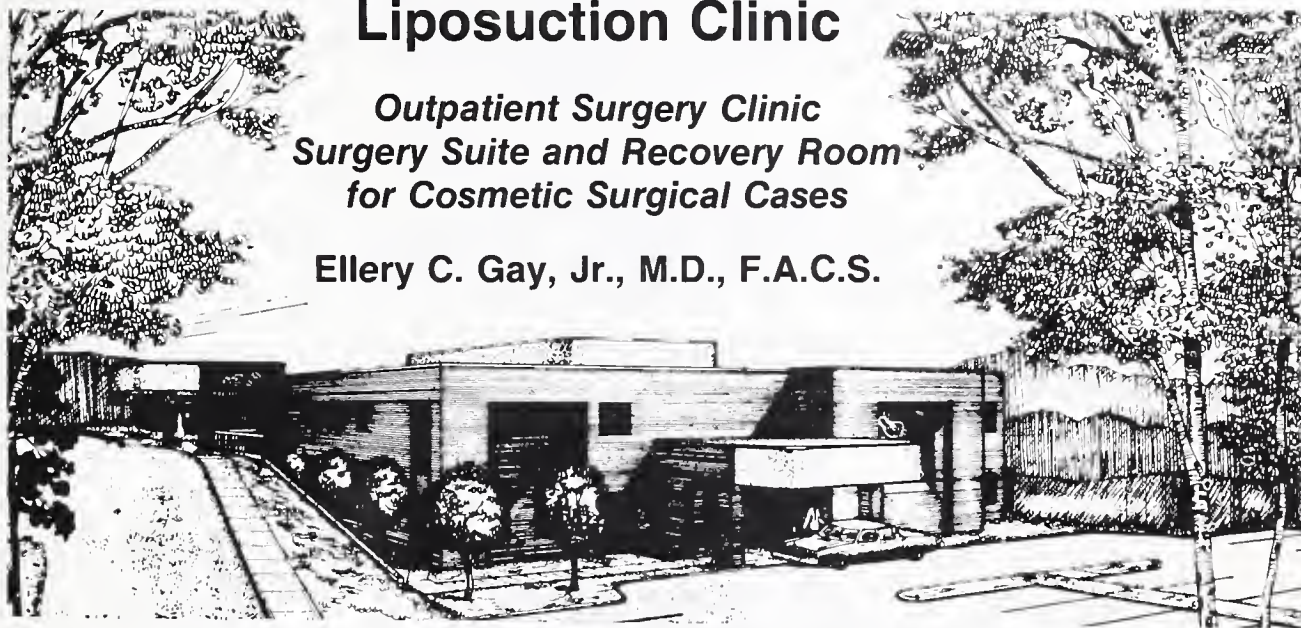
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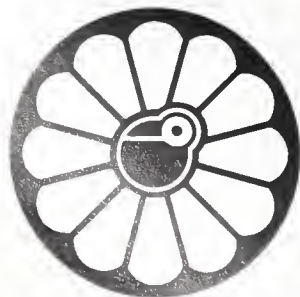
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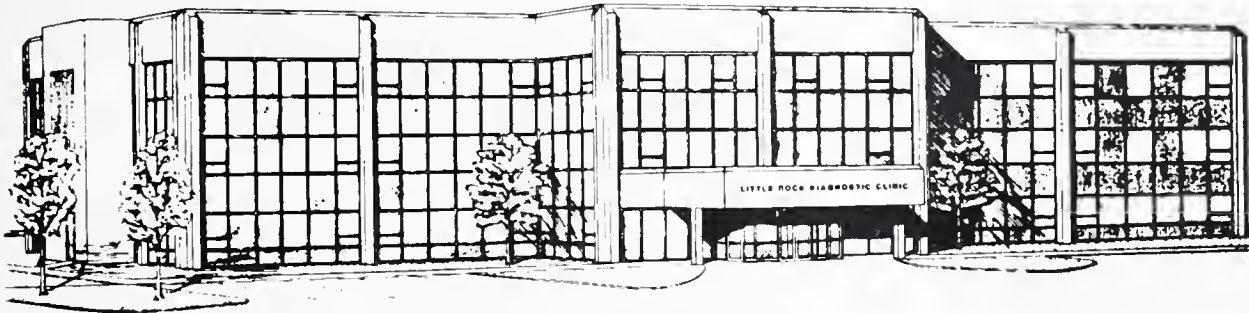
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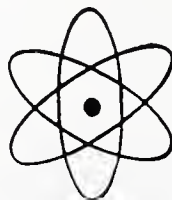
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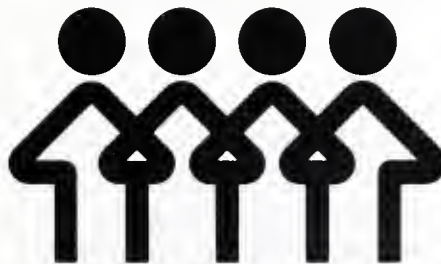
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Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving).

Usage in Pregnancy: Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage, withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline, symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).

Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady state concentrations of the tricyclic drugs.

Concomitant use of Limbitrol with other psychotropic drugs has not been evaluated, sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects.

Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring

reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.

The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs.

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Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.

Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.

Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.

Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.

Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.

Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.

Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion.

Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. IV administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

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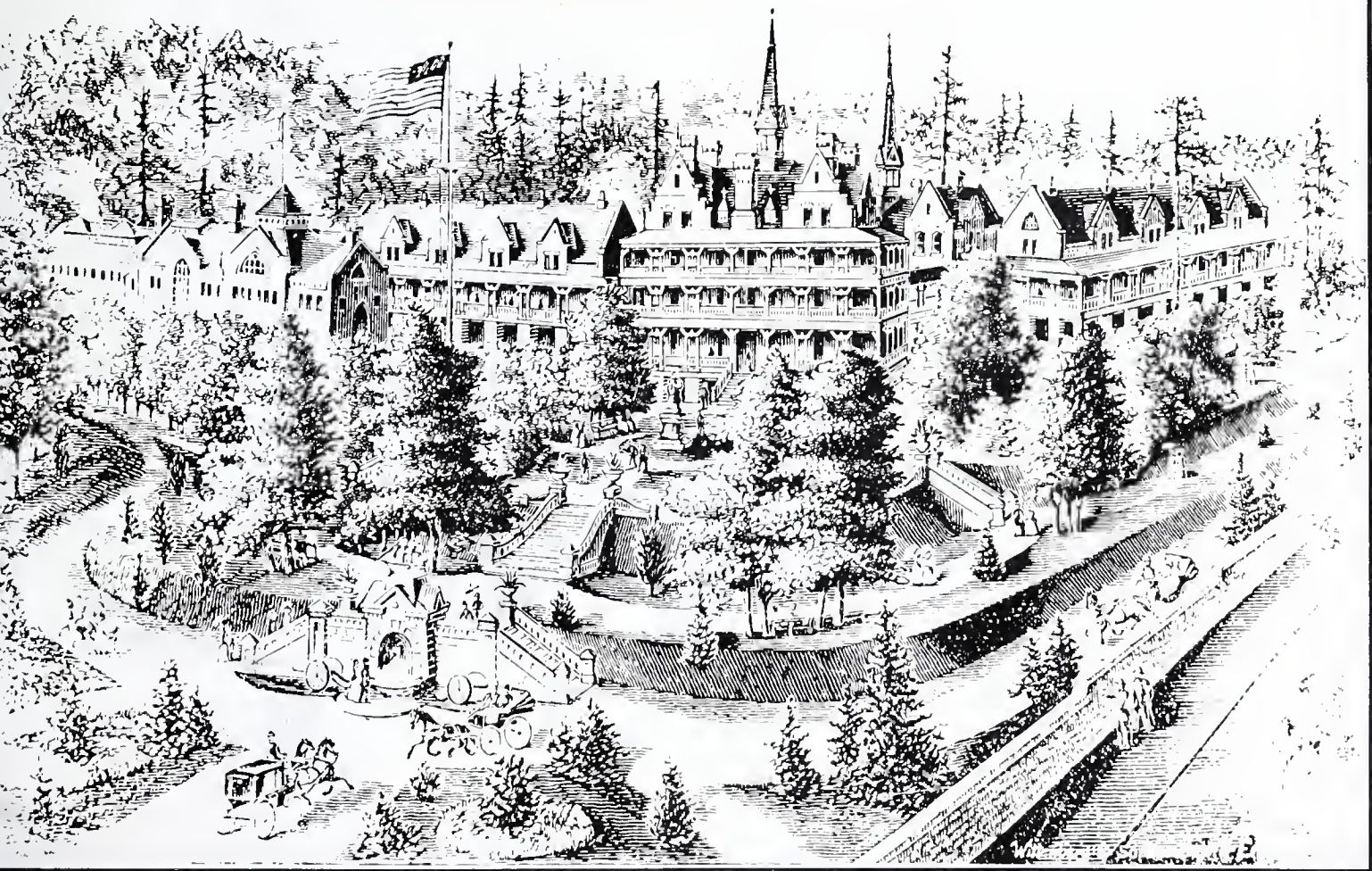
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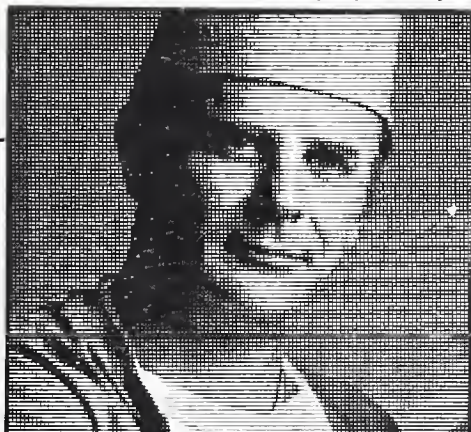
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Update: October 1987 Counselling and Antibody Testing Guidelines*

These guidelines are the outgrowth of the 1986 recommendations published in the MMWR¹; the report on the February 24-25, 1987 Conference on Counselling and Testing²; and a series of meetings with representatives from the Association of State and Territorial Health Officials, the Association of State and Territorial Public Health Laboratory Directors, the council of State and Territorial Epidemiologists, the National Association of County Health Officials, the United States Conference of Local Health officers, and the National Association of State Alcohol and Drug Abuse Directors.

Human immunodeficiency virus (HIV), the causative agent of acquired immunodeficiency syndrome (AIDS) and related clinical manifestations, has been shown to be spread by sexual contact; by parental exposure to blood (most often through intravenous [IV] drug abuse) and, rarely, by other exposures to blood; and from an infected woman to her fetus or infant.

Persons exposed to HIV usually develop detectable levels of antibody against the virus within 6-12 weeks of infection. The presence of antibody indicates current infection, though many infected persons may have minimal or no clinical evidence of disease for years. Counselling and testing persons who are infected or at risk for acquiring HIV infection is an important component of prevention strategy.¹ Most of the estimated 1.0 to 1.5 million infected persons in the United States are unaware that they are infected with HIV. The primary public health purposes of counselling and testing are to help uninfected individuals initiate and sustain behavioral changes that reduce their risk of becoming infected and to assist infected individuals in avoiding infecting others.

Along with the potential personal, medical, and public health benefits of testing for HIV antibody, public health

agencies must be concerned about actions that will discourage the use of counselling and testing facilities, most notably the unauthorized disclosure of personal information and the possibility of inappropriate discrimination.

Priorities for public health counselling and testing should be based upon providing ready access to persons who are most likely to be infected or who practice high-risk behaviors, thereby helping to reduce further spread of infection. There are other considerations for determining testing priorities, including the likely effectiveness of preventing the spread of infection among persons who would not otherwise realize that they are at risk. Knowledge of the prevalence of HIV infection in different populations is useful in determining the most efficient and effective locations providing such services. For example, programs that offer counselling and testing to homosexual men, IV-drug abusers, persons with hemophilia, sexual and/or needle-sharing partners of these persons, and patients of sexually transmitted disease clinics may be most effective since persons in these groups are at high risk for infection. After counselling and testing are effectively implemented in settings of high and moderate prevalence, consideration should be given to establishing programs in settings of lower prevalence.

Interpretation of HIV-Antibody Test Results

A test for HIV antibody is considered positive when a sequence of tests, starting with a repeatedly reactive enzyme

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immunoassay (EIA) and including an additional, more specific assay, such as a Western blot, are consistently reactive.

The sensitivity of the currently licensed EIA tests is 99% or greater when performed under optimal laboratory conditions. Given this performance, the probability of a false-negative test result is remote, except during the first weeks after infection, before antibody is detectable.

The specificity of the currently licensed EIA tests is approximately 99% when repeatedly reactive tests are considered. Repeat testing of specimens initially reactive by EIA is required to reduce the likelihood of false-positive test results due to laboratory error. To further increase the specificity of the testing process, laboratories must use a supplemental test - most often the Western blot test - to validate repeatedly reactive EIA results. The sensitivity of the licensed Western blot test is comparable to that of the EIA, and it is highly specific when strict criteria are used for interpretation. Under ideal circumstances, the probability that a testing sequence will be falsely positive in a population with a low rate of infection ranges from less than 1 in 100,000 (Minnesota Department of Health, unpublished data) to an estimated 5 in 100,000.^{3,4} Laboratories using different Western blot reagents or other tests or using less stringent interpretive criteria may experience higher rates of false-positive results.

Laboratories should carefully guard against human errors, which are likely to be the most common source of false-positive test results. All laboratories should anticipate the need for assuring quality performance of tests for HIV antibody by training personnel, establishing quality controls, and participating in performance evaluation systems. Health department laboratories should facilitate the quality assurance of the performance of laboratories in their jurisdiction.

Guidelines for Counselling and Testing for HIV antibody

These guidelines are based on public health considerations for HIV testing, including the principles of counselling before and after testing, confidentiality of personal information, and the understanding that a person may decline to be tested without being denied health care or other services, except where testing is required by law.⁵ Counselling before testing may not be practical when screening for HIV antibody is required. This is true for donors of blood, organs, and tissue; prisoners; and immigrants for whom testing is a Federal requirement as well as for persons admitted to state correctional institutions in states that require testing. When there is

AMS AIDS COMMITTEE PLEASED WITH RESPONSE

SEMINARS SPAWN STATEWIDE PROGRAMS

As many of you are aware, the Arkansas Medical Society's Special Committee on AIDS has been involved, in conjunction with other health agencies, in seminars which have been teaching physicians and health care professionals about the diagnosis, treatment, and counseling of ARC/AIDS patients as well as informing the public about high risk behavior and the transmission of the virus. The response has been very good. For example, after the August 15th teaching seminar in Little Rock, physicians from 10 counties held programs of their own with a total attendance of 800 persons.

Contacts have been made with newspapers, radio and television stations, civic groups, medical auxiliary members, churches, rotary clubs, and banks.

Most rewarding has been the response from the schools. We have had inquiries from ten schools ranging from the Osceola Middle School to Arkansas Tech University.

There will be more teaching seminars in the near future. If you are interested in attending, contact the Arkansas Medical Society office at 224-8967.

no counselling before testing, persons should be informed that testing for HIV antibody will be performed, that individual results will be kept confidential to the extent permitted by law, and that appropriate counselling will be offered. Individual counselling of those who are either HIV-antibody positive or at continuing risk for HIV infection is critical for reducing further transmission and for ensuring timely medical care.

Recommendations

Persons who may have sexually transmitted disease. All persons seeking treatment for a sexually transmitted disease, in all health-care settings including the offices of private physicians, should be routinely counselled and tested for HIV antibody.

IV-drug abusers. All persons seeking treatment for IV-drug abuse or having a history of IV-drug abuse should be routinely counselled and tested for HIV antibody. Medical professionals in all health-care settings, including prison clinics, should seek a history of IV-drug abuse from patients and should be aware of its implications for HIV infection. In addition, state and local health policy makers should address the following issues:

a. Treatment programs for IV-drug abusers should be sufficiently available to allow persons seeking assistance to enter

"Routine counselling and testing" is defined as a policy to provide these services to all clients after informing them that testing will be done. Except where testing is required by law, individuals have the right to decline to be tested without being denied health care of other services.

promptly and be encouraged to alter the behavior that places them and others at risk for HIV infection.

b. Outreach programs for IV-drug abusers should be undertaken to increase their knowledge of AIDS and of ways to prevent HIV infection, to encourage them to obtain counselling and testing for HIV antibody, and to persuade them to be treated for substance abuse.

Persons who consider themselves at risk. All persons who consider themselves at risk for HIV infection should be counselled and offered testing for HIV antibody.

Women of childbearing age. All women of childbearing age with identifiable risks for HIV infection should be routinely counselled and tested for HIV antibody, regardless of the health-care setting. Each encounter between a health-care provider and a woman at risk and/or her sexual partners is an opportunity to reach them with information and education about AIDS and prevention of HIV infection. Women are at risk for HIV infection if they:

- a. Have used IV drugs.
- b. Have engaged in prostitution.
- c. Have had sexual partners who are infected or are at risk for infection because they are bisexual or are IV-drug abusers among women.
- d. Are living in communities or were born in countries where there is a known or suspected high prevalence of infection among women.
- e. Received a transfusion before blood was being screened for HIV antibody but after HIV infection occurred in the United State (e.g., between 1978 and 1985.)

Educating and testing these women before they become pregnant allows them to avoid pregnancy and subsequent intrauterine perinatal infection of their infants (30% - 50% of the infants born to HIV-infected women will also be infected).

All pregnant women at risk for HIV infection should be routinely counselled and tested for HIV antibody. Identifying pregnant women with HIV infection as early in pregnancy as possible is important for ensuring appropriate medical care for these women; for planning medical care for their infants; and for providing counselling on family planning; future pregnancies, and the risk of transmission of HIV to others.

Arkansas AIDS Statistics

The Arkansas Department of Health reported no change in the number of AIDS cases in the state from last month. The total number of cases stands at 66. The Department wants to emphasize that the figures reported are **cases diagnosed in Arkansas only**. The figures do not include patients who have been diagnosed in other states and since moved to Arkansas.

All women who seek family planning services and who are at risk for HIV infection should be routinely counselled about AIDS and HIV infection and tested for HIV antibody. Decisions about the need for counselling and testing programs in a community should be based on the best available estimates of the prevalence of HIV infection and the demographic variables of infection.

Persons planning marriage. All persons considering marriage should be given information about AIDS, HIV infection, and the availability of counselling and testing for HIV antibody. Decisions about instituting routine or mandatory premarital testing for HIV antibody should take into account the prevalence of HIV infection in the area and/or population group as well as other factors and should be based upon the likely cost-effectiveness of such testing in preventing further spread of infection. Premarital testing in an area with a prevalence of HIV infection as low as 0.1% may be justified if reaching an infected person through testing can prevent subsequent transmission to the spouse or prevent pregnancy in a woman who is infected.

Persons undergoing medical evaluation or treatment. Testing for HIV antibody is a useful diagnostic tool for evaluating patients with selected clinical signs and symptoms such as generalized lymphadenopathy; unexplained dementia; chronic, unexplained fever or diarrhea; unexplained weight loss; or diseases such as tuberculosis as well as sexually transmitted disease, generalized herpes, and chronic candidiasis.

Since persons infected with both HIV and the tubercle bacillus are at high risk for severe clinical tuberculosis, all patients with tuberculosis should be routinely counselled and tested for HIV antibody.⁶ Guidelines for managing patients with both HIV and tuberculous infection have been published.⁷

The risk of HIV infection from transfusions of blood or blood components from 1978-1985 was greatest for persons receiving large numbers of units of blood collected from areas with high incidences of AIDS. Persons who have this increased risk should be counselled about the potential risk of HIV infection and should be offered antibody testing.⁸

Persons admitted to hospitals. Hospitals, in conjunction with state and local health departments, should periodically determine the prevalence of HIV infections in the age groups at highest risk for infection. Consideration should be given to routine testing in those age groups deemed to have a high prevalence of HIV infection.

Persons in correctional systems. Correctional systems should study the best means of implementing programs for counselling inmates about HIV infection and for testing them for such infection at admission and discharge from the system. In particular, they should examine the usefulness of these programs in preventing further transmission of HIV infection and the impact of the testing programs on both the inmates and the correctional system.⁹ Federal prisons have been instructed to test all prisoners when they enter and leave the prison system.

From the Arkansas Department of Health: Section XI. Rules and regulations pertaining to the identification of the body of a deceased person who may have been infected by a communicable disease.

Any physician or any other person who has reason to believe that a deceased person may have been infected by a communicable disease, including, but not limited to *rabies, plague, hepatitis B, or a hepatitis B carrier (HRs Ag positive), hepatitis non-A non-B, tularemia, AIDS (Acquired Immune Deficiency Syndrome) or is HIV antibody positive and ARC (AIDS Related Complex)*, shall immediately after death, attach to the large digit of the right foot, a red indicator tag measuring not less than 3 inches by 5 inches, which clearly states that the patient may have been infected with one of the above communicable diseases. If the body is wrapped in plastic sheets or other covering material and the toe tag is not visible, a duplicate, clearly visible tag shall be applied to the outside covering material.

Prostitutes. Male and female prostitutes should be counselled and tested and made aware of the risks of HIV infection to themselves and others. Particularly prostitutes who are HIV-antibody positive should be instructed to discontinue the practice of prostitution. Local or state jurisdictions should adopt procedures to assure that these instructions are followed.

Partner Notification/Contact Tracing

Sexual partners and those who share needles with HIV-infected persons are at risk for HIV infection and should be routinely counselled and tested for how to notify their partners and to refer them for counselling and testing. If they are unwilling to notify their partners or if it cannot be assured that their partners will seek counselling, physicians or health department personnel should use confidential procedures to assure that the partners are notified.

Confidentiality and Antidiscrimination Considerations

The ability of health departments, hospitals, and other health-care providers and institutions to assure confidentiality of patient information and the public's confidence in that ability are crucial to efforts to increase the number of persons being counselling and tested for HIV infection. Moreover, to assure broad participation in the counselling and testing programs, it is of equal or greater importance that the public perceive that persons found to be positive will not be subject to inappropriate discrimination.

Every reasonable effort should be made to improve confidentiality of test results. The confidentiality of related records can be improved by a careful review of actual record-keeping practices and by assessing the degree to which these records can be protected under applicable state laws. State laws should be examined and strengthened when found necessary. Because of the wide scope of "need-to-know" situations, because of the possibility of inappropriate disclosures, and because of established authorization procedures for releasing records, it is recognized that there is no perfect solution to confidentiality problems in all situations. Whether

disclosures of HIV-testing information are deliberate, inadvertent, or simply unavoidable, public health policy needs to carefully consider ways to reduce the harmful impact of such disclosures.

Public health prevention policy to reduce the transmission of HIV infection can be furthered by an expanded program of counselling and testing for HIV antibody, but the extent to which these programs are successful depends on the level of participation. Persons are more likely to participate in counselling and testing programs if they believe that they will not experience negative consequences in areas such as employment, school admission, housing, and medical services should they test positive. There is no known medical reason to avoid an infected person in these and ordinary social situations since the cumulative evidence is strong that HIV infection is not spread through casual contact. It is essential to the success of counselling and testing programs that persons who are tested for HIV are not subjected to inappropriate discrimination.

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"LEGALLY SPEAKING"

RE: Physician Legal Immunity

Michael W. Mitchell, J.D.*



In order to encourage certain actions in the public interest, the law sometimes provides special protection to physicians. For example, a physician acting "as a reasonable and prudent person" who lends emergency care without compensation at the place of an emergency or accident may not be held liable for civil damages.¹ This same rule applies for emergency medical assistance rendered to a "participant in a school athletic event or contest".² The doctrine (sovereign immunity) which protects the State from liability has been extended to physician employees of the State, except to the extent of any liability insurance.³

Civil immunity in "state action" situations is granted to physicians placed in an official or quasi official capacity to discipline the profession. The most notable example is the immunity granted to the members of the Arkansas State Medical Board.⁴ Hospitals are required to report to the Arkansas State Medical Board any physician whose hospital privileges have been "revoked, limited or terminated for any cause, including resignation" or any "formal disciplinary action" taken and anyone reporting such information shall not be liable for damages.⁵ Similarly every physician is required to report any malpractice lawsuits within ten days to the Medical Board and such reporting is "privileged."⁶

To encourage the operation of professional review committees, the law provides for "no monetary liability" and "no cause of action for damages" to any member of a committee of a professional society or any member of a committee of the medical staff of a licensed hospital established to maintain professional standards.⁷ Furthermore, limitation of discovery is provided to "organized committees of hospital medical staffs or medical review committees of local medical societies" reviewing the quality of medical or hospital care. Such information is not discoverable nor is it admissible in any legal proceeding and is "absolutely privileged communication".⁸ However, an innovative lawyer recently used the federal antitrust laws to obtain a \$2 million judgment against the

physicians on a peer review committee. The United State Court of Appeals reversed and ruled that the M.D.s engaged in peer review are protected from antitrust laws because this is "state action" which activity cannot be considered a restraint of trade under antitrust laws.⁹ Although the case is now on appeal to the United State Supreme Court, a federal law was recently passed providing that any professional review body "shall not be liable in damages under any law of the United State or any state."¹⁰

Laws providing for immunity to civil action and protection against discovery are necessary to protect persons who are acting in the public interest. However, these laws should not be blindly relied upon for protection. Every effort should be made to act in a reasonable and prudent manner. Immunity laws may not apply in cases where gross negligence or malice is proved.

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"Legally Speaking" has been added to the Journal format as a regular feature in response to our readers' requests for information concerning medicine and the law. Mr. Mitchell asks that members send their legal questions for future "diagnosis and treatment" to: "Legally Speaking", Arkansas Medical Society, Post Office Box 5776, Little Rock, Arkansas 72215.

* General Counsel to the Arkansas Medical Society, Mitchell and Roachell Law Firm, Little Rock.

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Maintenance Digoxin: Utilization in Clinic, Nursing Home and Family Practice Setting

Keith E. Miller, M.D. and Barbara Mason, Pharm. D.

Introduction

In 1985, digoxin was the third most frequently prescribed drug in the United States. Digoxin is indicated for the treatment of left ventricular failure and chronic atrial fibrillation with rapid ventricular response.

One difficulty in using digoxin is the narrow therapeutic range it has. This often makes the proper use of digoxin quite a problem. One recent study of 391 patients on digoxin revealed that 40.7% of the patients were in a sub-therapeutic range; 9.7% were in a toxic range; and only 49.3% were in a therapeutic range.¹ Other studies have documented similar results.²⁻⁴

Another consideration for determining the clinical justification of digoxin therapy is that many patients on maintenance digoxin actually received no clinical benefit from the drug. One study examined 24 patients on long-term digoxin. Three were in a sub-therapeutic range, 13 were therapeutic, and one was in a toxic range. All 24 had their digoxin discontinued and all remained symptom-free off medication.⁵ Another study of 80 patients on maintenance digoxin revealed that 59 were able to discontinue their medication without symptoms.⁶

We designed this study to document the high frequency of patients on non-therapeutic digoxin dosages both in the outpatient and nursing home settings. We wanted to compare the frequency of non-therapeutic serum levels in these two groups.

Methods

Participants in this study included patients on digoxin who were seen in our family practice center during a period of approximately six months. Also included were all nursing home patients on digoxin who were under our care.

Participation in the study required each patient to be on maintenance digoxin. Each patient had been on their current dosage of medication for at least two weeks prior to measuring

their serum levels. Patients on digoxin who were concurrently taking quinidine or verapamil were excluded from the study.

Data recorded for each participant included age, sex, digoxin dosage, other medication and indications for being on digoxin. Serum digoxin concentrations were measured by radioimmunoassay, using the Abbott TDX Kit (Abbott reagents). Results were collected and a considered therapeutic range of 1.0 - 2.0 mg/1 was used.

Results

A total of 62 patients were entered into the study. These consisted of 20 nursing home patients and 42 clinic patients. Clinical data was compiled on these patients and the results noted (Table I).

Indications for digoxin therapy were noted for each patient and compiled (Table II).

The actual serum digoxin levels were recorded and grouped by sub-therapeutic, therapeutic, or toxin range. The results are shown by total and subdivided by chemical data on

TABLE I. Clinical Data on 62 Patients on digoxin.
Figures are number (%) of patients.

Location	Nursing Home 20 (32.3)	Clinic 42 (67.7)
Sex	Male 20 (32.3)	Female 42 (67.7)
Age Category (years)	<65 10 (16.1)	>65 52 (83.8)
Average Age (years)	77.7	
Daily Dose (mg)	0.1771	

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TABLE II. Indications for digoxin therapy in 62 patients. Figures are numbers (%) of patients.

Congestive Heart Failure	42 (69.4)
Atrial Fibrillation	5 (8.0)
Congestive Heart Failure and Atrial Fibrillation	3 (4.8)
Other	5 (8.0)
Unknown	6 (9.7)

Table III. Statistical analysis was performed using the chi-square test.

A total of 34 (54.8%) patients were found to be sub-therapeutic, while 24 (38.7%) were therapeutic, and 4 (6.5%) were

ingly, the incidence of non-therapeutic ranges in nursing home patients, where compliance should be ideal, is essentially equal to that of the clinic population.

Summary

Serum digoxin levels were measured in 62 patients on maintenance digoxin. The group consisted of 20 nursing home and 42 clinic patients. A total of 34 (54.8%) patients were found to be sub-therapeutic, while 24 (38.7%) were therapeutic, and 4 (6.5%) were in a toxic range. The high frequency of patients on maintenance digoxin with non-therapeutic serum levels, necessitates more scrutiny of the frequent use of this drug.

Acknowledgments

This study was sponsored in part by a grant from the Fraternal Order of Eagles. The authors wish to express their thanks for the support. The authors also wish to thank James E. Doherty, M.D., for his review and critique of this paper, and Mrs. Gen Abdella for her work in preparing this manuscript.

TABLE III. Serum ranges in 62 patients; by totals and subdivided by clinical data. Figures are number (%) of patients.

	Location		Sex		Age Category (years)		Total number in each range
	Clinic	Nursing Home	Male	Female	<65	>65	
Sub-therapeutic	23 (54.8)	11 (55)	16 (80)	18 (42.9)	7 (70)	27 (51.9)	34 (54.8)
Therapeutic	17 (40.5)	7 (35)	4 (20)	20 (47.6)	3 (30)	21 (40.4)	24 (38.7)
Toxic	2 (4.8)	2 (1)	0	4 (9.5)	0	4 (7.7)	4 (6.5)

in the toxic range. These percentages were approximately the same regardless of whether the participant was a clinic or nursing home patient.

Discussion

The incidence of patients with non-therapeutic serum levels of digoxin was documented by our study to be even higher than that demonstrated by previous studies. Interest-

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Here to Help: Impaired Physicians Committee

Joe Martindale, M.D., Chairman

We, as physicians, have many hours of time and many dollars invested in our education - too much to let it go down the drain because of chemical dependency. Statistics show that 10 to 15 % of physicians, students, and residents are in some state of addiction to alcohol, drugs or both. Some are addicted to a degree that it impairs their ability to practice good quality medicine. It also reduces their roles as family members and members of their community. Chemical dependence causes deterioration of our mental, physical, and spiritual selves. I feel that it is time that we pull our heads out of the sand and deal with this very serious health problem.

We know now that chemical dependence is a diagnosable and treatable disease with definite signs and symptoms - the first being denial. We also know that early detection and intervention is essential to recovery. Until now board intervention was the only avenue to get into a treatment program. Usually, that action was not taken until we were in the late stages of our illness and involved license suspension. Many doctors were put back to work free of drugs and alcohol. Other chemically dependent doctors, because of this providence, became more careful with their alcohol and drug use but did not stop. They continued to progress in their illness until it could no longer be hidden and they too became victims to licensure problems. Although many doctors have been helped, we feel that our present system needs some help from another source. Too many good people and good doctors are "falling through the cracks" in our present system and never recovering. They move to other states and are soon in trouble there as well.

Some medical societies have faced the problem of chemical dependence "head on" with the development of impaired physicians committees and have documented evidence that they are very successful. Although Arkansas has had such a committee for several years, it has not had the support needed from the board and the medical society as a whole. We now feel that we have this support and can proceed to improve the quality of care in our state. We have a responsibility to our patients and to our chemically dependent doctors to maintain the high quality of care we now enjoy. We hope to accomplish this through the AMS Impaired Physicians Committee.

Our committee is composed of seven members - the majority of whom are recovering from chemical dependency. We are an advocacy committee whose primary purpose is to help identify troubled physicians and encourage them to seek treatment. We will investigate complaints about physicians and determine if intervention is indicated. We will talk with the physician and attempt to break through the denial phase of the disease so the he/she can see the need for help and get it. We will recommend treatment programs we have investigated and found appropriate and we will help the physician reenter after treatment is completed. A two year monitoring program is planned for every physician who completes a treatment program. We strongly recommend support group attendance after treatment. There is now an active IDAA (International Doctors in Alcohol Anonymous) group in Arkansas established in 1987 to develop a fellowship of physicians who are recovering. Information concerning activities of this group will appear in the AMS newsletters from time to time.

We will keep all inquiries strictly confidential, thus, anyone calling the society office need not give names or locations. We hope that we can develop a mutual trust between the committee and the impaired physicians but we realize time is what is needed. Members of the committee are available to speak at staff meetings and auxiliary meetings upon request. Many hours of education will be necessary and some satisfactory results obtained before this trust develops. We know this and ask for your patience and support while we are developing this program.

In conclusion, allow me to speak from a personal standpoint. I am recovering and have been since 1978. Many times during my recovery I have been hungry for the fellowship of other recovering doctors. Very little fellowship was available and that on a very limited basis. Because of this, I have felt very strongly that a committee and a support group for recovering doctors was needed in Arkansas. That is now a reality. We serve without pay and have no interest in any treatment facility. Our only reward is to see our colleagues attain the quality of life and respect of their communities, family, and peers that we are enjoying in our recovery. We can help if you will let us.

Cardiac Arrhythmia Surgery

*Eleanor E. Kennedy, M.D. *, G. Richard Westerman, M.D., M. Michele Moss, M.D., W. T. Dungan, M.D., and Joe K. Bissett, M.D.*

Recent technology involving intracardiac electrocardiographic recordings has enabled cardiologists and cardiovascular surgeons to localize the point of origin of cardiac arrhythmias, which then can be surgically eliminated. Two case reports, one of ventricular tachycardia and one of Wolff-Parkinson-White syndrome are given as examples.

Introduction

Ever since the first description of initiation and termination of reentrant arrhythmias in humans by pacing techniques¹, electrophysiologic (EP) testing has been used increasingly in the management of patients with life-threatening arrhythmias. The development of catheter mapping techniques enabled precise location of abnormal cardiac tissue responsible for the genesis of arrhythmias.^{2,3} Surgical extirpation of arrhythmogenic tissue as identified by mapping was then enabled for those cases refractory to medical management. The first application of EP-guided surgery occurred in a patient with Wolff-Parkinson-White Syndrome.⁴ Later, mapping techniques were used to pinpoint areas of diseased myocardium most crucial for excision in patients with sustained ventricular tachycardia,^{5,6} providing a significant advantage over the previous technique of "blind" ventricular aneurysm resection.⁷

Mapping and map-guided surgical techniques have been employed in the management of other arrhythmias such as AV nodal reentrant tachycardia, atrial tachycardia, atrial flutter, and atrial fibrillation. However, refractory ventricular tachycardia (VT) and AV reciprocating tachycardia in patients with Wolff-Parkinson-White syndrome (WPW) still constitute the most commonly performed arrhythmia surgical procedures. The purpose of this paper is to provide a brief review of the techniques involved in this promising field, with case history illustrations.

Ventricular Tachycardia - Case History

A 65-year-old male with a previous anterior wall myocardial infarction was referred for evaluation because of recurrent sustained VT which had been refractory to therapy with quinidine, tocainide, procainamide, and lidocaine. Electrophysiologic testing disclosed inducible sustained monomorphic VT of two different QRS morphologies. A trial of flecainide therapy was unsuccessful. He was then placed on amiodarone, but VT recurred after 13 days of high-dose therapy, and was responsive only to intravenous bretyllium.

Endocardial mapping was performed in the cardiac catheterization laboratory. A #6F quadripolar catheter was positioned in the right ventricle from the right femoral vein for arrhythmia induction by pacing and for recording of reference electrograms. A #6F custom-made hexapolar mapping catheter was positioned in various locations in the left ventricle via retrograde aortic cannulation, using the femoral approach. Both morphologies of VT were induced and mapped, the earliest site of electrical activation occurring at the mid-portion of the left ventricular septum at the junction between the septum and the free posterior wall.

Coronary angiography revealed critical stenosis of the left anterior descending coronary artery. Left ventriculography revealed a large anteroapical aneurysm (Figure 1), with an overall left ventricular ejection fraction of 30%.

The patient was then taken to the operating room. Epicardial wires were sutured onto the right ventricle for pacing purposes, and onto the left ventricle for recording of reference electrograms. Left ventriculotomy was performed, and endocardial mapping was carried out under direct vision using a hand-held quadripolar catheter for recording of bipolar electrograms.

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Figure 1. Left ventriculogram in the right anterior oblique projection, end-systole. A large antero-apical aneurysm is apparent. Quadripolar pacing wires are seen in the coronary sinus and the apex of the right ventricle.

Analysis of endocardial electrograms during induced VT confirmed the earliest site of electrical activation to be on the posterior aspect of the mid-interventricular septum (Figure 2). Under cardioplegic arrest, a single bypass graft was performed to the left anterior descending coronary artery, after which resection of the arrhythmogenic subendocardium identified by mapping was carried out. The left ventricular aneurysm was resected, and the ventriculotomy closed, a total of approximately 20cm² of tissue having been removed.

The patient's postoperative recovery was uneventful. Electrophysiologic testing ten days postoperatively revealed no inducible VT from either right or left ventricular stimulation.

Comment

The theoretical basis for mapping in VT rests largely on the concept that VT is a reentrant arrhythmia, arising from a relatively small myocardial focus with fragmented or continuous electrical activity from which an electrical wave front spreads in a continuous loop or centrifugal pattern of activation.⁸⁻¹⁰ During VT, myocardium closest to the focus of VT origin exhibits electrograms which occur early relative to myocardium which is farther anatomically removed.

Most cases of recurrent sustained VT occur in individuals with coronary artery disease and prior myocardial infarctions. In these cases, epicardial, endocardial, and transmural mapping studies have indicated that the area responsible for arrhythmia initiation and perpetuation is in the subendocardium, usually along a border area between infarcted and often aneurysmal myocardium and adjacent normal myocardium.^{5,6} Once the earliest area of electrical activity is identified, resection is performed. The extent of resection has varied between institutions, with some investigators recommending

more limited procedures guided primarily by the mapping study and involving approximately 10-25 cm² of tissue,¹¹ and others recommending the removal of all visible scar in a procedure which is guided secondarily by the mapping study.¹² Because the papillary muscles and right ventricular septum may be involved, adjunctive procedures have included papillary muscle resection with mitral valve replacement, cryotherapy of papillary muscles, and cryotherapy of the right ventricular septum.^{13,14} More limited procedures may better preserve cardiac output, but appear to be associated with a higher postoperative VT inducibility rate.

The preoperative mapping study as performed in the catheterization laboratory is of crucial importance. In approximately 11% of cases ventricular tachycardia is not inducible in the operating room,¹⁵ perhaps because of the variable effects of anaesthesia, thorocotomy, cooling, and ventriculotomy.¹⁶ In these patients, the preoperative study constitutes the only guide. The risk of myocardial damage due to excessive bypass time is lessened if operative mapping is largely a confirmatory procedure.

Review of a previously published large series reveals a perioperative mortality rate of 9-17%, with surgical mortality highest in patients with recent myocardial infarctions and with more severe grades of left ventricular dysfunction.^{12,14,15,17} Postoperative VT inducibility rate ranges from 3-34%, with some of the disparity between series reflecting differences in

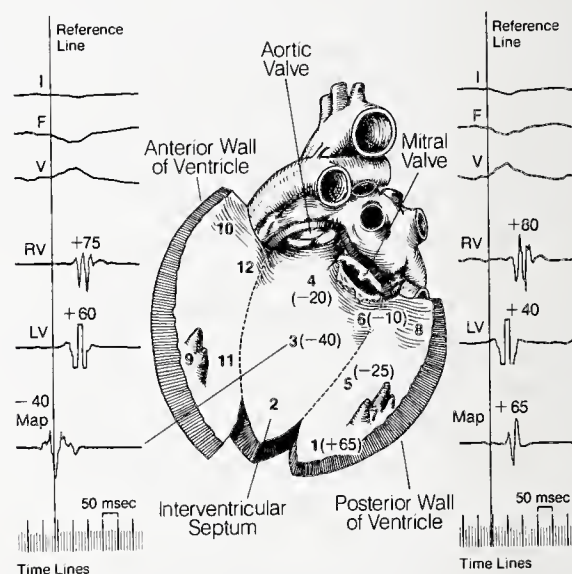


Figure 2. Intraoperative endocardial map. Number in parentheses indicate the onset of local electrical activation from anatomical regions (bold-faced numbers). Intraoperative recordings are shown on either side of the schematic, and consist of leads I, avF, V%, right ventricular (RV) and left ventricular (LV) reference electrograms from stationary epicardial leads, and mapping catheter electrogram. A reference line is drawn through the onset of the QRS complex on the surface leads. The tracing on the left shows early endocardial activation at 40 msec preceding the surface QRS occurring in region 3 (mid-septum), whereas the tracing on the right shows late endocardial activation at 65 msec following the surface QRS occurring in region 1, the infero-apical free wall.

induction protocols. Patients remaining inducible are discharged on antiarrhythmic regimens selected by EP testing. During long-term follow-up, late recurrence of ventricular tachycardia may be expected in 7-13% of patients. Risk factors associated with these unfavorable outcomes include poor left ventricular function, lack of discrete aneurysm, multiple VT morphologies, and widely disparate anatomical sites of VT origin.

Wolff-Parkinson-White Syndrome - Case History

A 12-year-old female was referred for evaluation of a rapid heart rate associated with dizziness and near-syncope. Cardiac examination revealed a parasternal lift, fixed splitting of the second heart sound, an ejection murmur at the left sternal border, and an apical diastolic rumble. 12-lead ECG during tachycardia showed a regular, narrow complex tachycardia at a rate of 240/min with a QRS axis of $+90^\circ$. Resting 12-lead ECG revealed a short PR interval with a delta wave and a mean QRS axis of -30° . Two-dimensional and doppler echocardiography were compatible with a moderate-sized secundum atrial septal defect. Cardiac catheterization showed normal pulmonary artery pressures and normal pulmonary vascular resistance and confirmed the presence of a secundum atrial septal defect, with a markedly elevated pulmonary:systemic flow ratio of 2.9:1.

Electrophysiologic testing was performed with the simultaneous use of four multipolar catheters inserted from the right and left femoral veins and the left subclavian vein and positioned in the right atrium, right ventricle, His bundle area, and coronary sinus. AV reciprocating tachycardia was induced, with the earliest onset of retrograde atrial activation occurring in the proximal poles of the coronary sinus catheter, compatible with the presence of a posterior septal accessory pathway.

Because of her hemodynamically significant atrial septal defect and her symptomatic AV reciprocating tachycardia, she was taken to the operating room for atrial septal defect closure and accessory pathway division. Epicardial pacing wires were sutured onto the left atrium just inferior to the entrance of the left ventricle adjacent to the crux. A hand-held quadripolar catheter was used for mapping, with unipolar electrograms used for localization. Atrial pacing to maximum pre-excitation was carried out, and revealed the earliest ventricular epicardial activation to occur just to the right of the interventricular septum, but after the onset of the surface QRS complex, compatible with the preoperative mapping study which had suggested a posterior septal location for the accessory pathway.

The right atrium was then incised and the atrial septal defect was closed by primary suture. The bundle of His was localized by catheter mapping. Endocardial mapping in the coronary sinus and around the tricuspid annulus during pacing-induced preexcitation localized the earliest site of ventricular activation to be 3 cm posterior to the mouth of the coronary sinus (Figure 3). Under moderate systemic hypot-

emia and cardioplegic arrest, dissection of the posterior septal space was carried out with division of the anomalous pathway. After rewarming, there was intact AV conduction without evidence of preexcitation both during sinus rhythm and during atrial pacing. The patient's post-operative course was benign, and she was discharged on the eighth postoperative day.

Comment

The anatomic substrate involved in AV reciprocating tachycardia in the Wolff-Parkinson-White syndrome includes the physiologic, normal AV conduction system as well as an anomalous muscle band (accessory pathway) which traverses the AV ring and allows a pathologic second avenue of conduction between atrium and ventricle. These anomalous muscle bands vary in width and in depth relative to the endocardium.¹⁸

Two major types of surgical procedures for accessory pathway division have been described, one using an endocardial approach,¹⁹ and the other an epicardial approach.²⁰ These techniques have each been used alone and in combination with each other. Septal accessory pathways as present in this case constitute especially difficult cases because of greater problems in localization, and greater likelihood of trauma to the AVE node and His bundle.²¹

Perioperative mortality figures for accessory pathway division at experienced centers range from 0-4%²⁰⁻²² and are largely dependent on the degree of pre-operative left ventricular dysfunction as well as the severity of associated congenital lesions. The success rate of accessory pathway division is high at 88-100%, with the majority of failures occurring in patients with septal accessory pathways or unrecognized multiple accessory pathways. Most recurrences of accessory pathway conduction after an apparently initially successful procedure

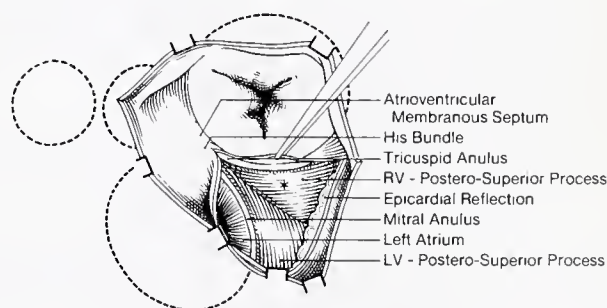


Figure 3. Operative view of the dissected posterior septal space, as seen through a right atrial incision. The asterisk identifies the site of the anomalous pathway. The mouth of the coronary sinus is hidden by the inferior reflection of the incised and retracted atrial endocardium.

are manifest within the first few months postoperatively.²²

As in surgery for ventricular tachycardia, preoperative mapping is of crucial importance. In the catheterization laboratory the accessory pathway is localized on a preliminary basis so that the operative mapping procedure is again essentially a confirmatory procedure and can be performed more rapidly, thereby minimizing the risk to the patient. Multiple accessory pathways are either diagnosed or excluded. As is the case with VT, AV reciprocating tachycardia may not be inducible in the operating room due to trauma to the accessory pathway, or the patient may tolerate tachycardia under general anaesthesia so poorly as to preclude intraoperative mapping. In these cases, the preoperative study serves as the only guide.

Conclusions

The cooperative efforts of the medical cardiac electrophysiologist and the cardiovascular surgeon have enabled the development of map-guided antiarrhythmia surgery. This particular collaborative effort is unique in its direct application of physiological concepts, as the surgical technique is guided by electrographic information which crucially supplements the more typical visual approach to surgical anatomic procedures. The results are most rewarding when these operations are performed in appropriate highly selected cases by subspecialty trained individuals. Future clinical experience and research efforts will broaden the scope of applicability as well as increasing the safety of operative procedures in this promising field.

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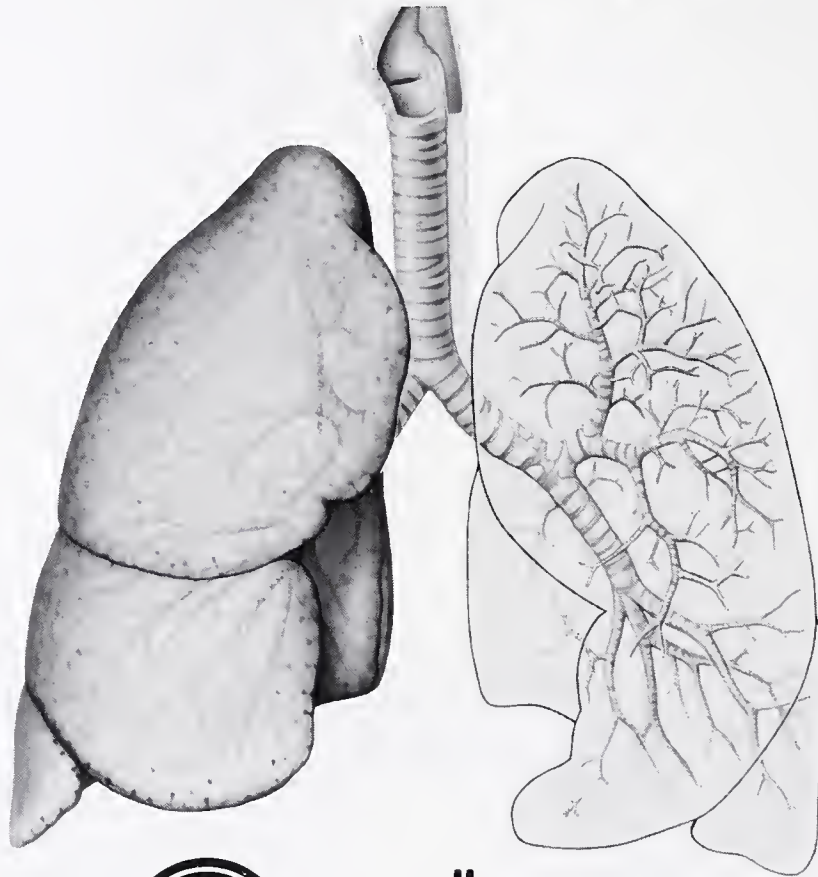
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- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)
Therapy-related adverse reactions are uncommon. Those reported include:

- Gastrointestinal (mostly diarrhea): 2.5%.
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever): 1.5%; usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness,

insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.

- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%; and, rarely, thrombocytopenia.

Abnormalities in laboratory results of uncertain etiology

- Slight elevations in hepatic enzymes.
- Transient fluctuations in leukocyte count (especially in infants and children).
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ELECTROCARDIOGRAM OF THE MONTH

Steve Greer, M.D.
John W. Watson, M.D.
UAMS Division of Cardiology
Little Rock, Arkansas

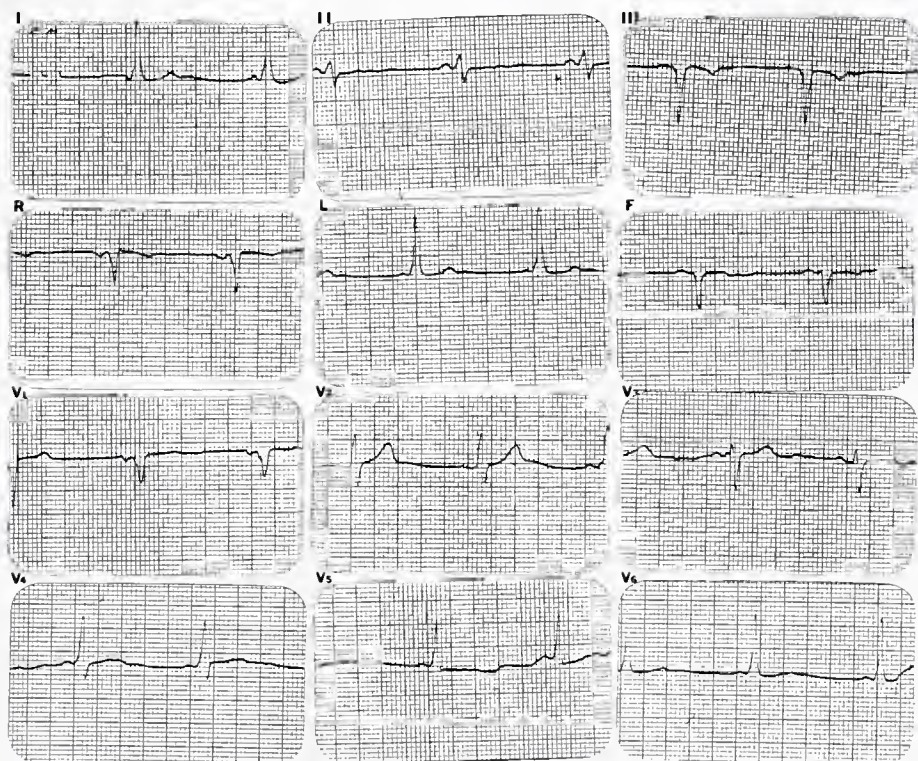
CLINICAL HISTORY:

A. H. is a 30-year-old man who gives a history of long duration of palpitations and episodes of rapid tachyarrhythmia. The patient presented with tachyarrhythmia and was converted with electrical therapy to a sinus mechanism. His conversion ECG is shown. What to you think?

DISCUSSION:

The trace shows sinus bradycardia with rate between 50 and 60 beats per minute. In addition, the PR interval appears to be less than 0.12 seconds and prominent delta waves are noted in many leads. These findings are compatible with Wolff-Parkinson-White syndrome. On occasion, this condition calls for sophisticated electrophysiologic studies which can now be done in several of the hospitals in Little Rock.

The editor wishes to thank Dr. Greer, who is in the practice of Cardiology and Electrophysiology at Arkansas Baptist Medical Center in Little Rock, for his assistance with this month's featured electrocardiogram.



Small Cell Carcinoma of the Lung

*Anthony R. Giglia, M.D., William E. Atkinson, M.D., Michael F. Knox, M.D.,
Harold D. Langston, M.D., and Lawrence A. Mendelsohn, M.D.**

Problem

A 58-year-old woman with a previous diagnosis of small cell carcinoma of the lung presented to the Second Opinion Panel for a discussion of her treatment options.

The patient had a history of alcohol abuse with a diagnosis of alcoholic hepatitis seven years earlier. She complained of weakness and considerable weight loss at that time. Upon presenting to the panel, the patient claimed she no longer drank alcohol.

The patient had a long history of smoking two packs of cigarettes a day. She had complained of a persistent cough and fever when she was admitted to the hospital three weeks earlier for probable pneumonia with a left hilar mass.

After being diagnosed with small cell carcinoma of the lung with postobstructive pneumonia, the patient was treated with three courses of vincristine, doxorubicin (Adriamycin), and cyclophosphamide (Cytosan) (VAC) and antibiotics for the postobstructive pneumonia. The patient's physician reported that his plan had included follow-up for evidence of remission with the possibility of radiation therapy and/or chemotherapy after the completion of VAC. Before such follow-up could begin, the patient presented for a second opinion.

The patient stated that she had been coughing more, feeling weak, and running a fever in the last few days.

Pathology Review

Dr. Atkinson: An endobronchial biopsy of the left hilar mass revealed small cell carcinoma. Sections of the left hilum revealed malignant cells and some metaplastic squames. The sputum cytologies revealed small cell carcinoma.

Diagnostic X-Ray Evaluation

Dr. Knox: The patient's chest x-ray was not available for review. The cavitary lesion reported on the chest film could be due to bronchial obstruction, but a skin test should be ordered

to rule out tuberculosis. Complete body bone scan and computerized tomography of the head with and without intravenous contrast enhancement were reviewed and found to be normal. The liver/spleen scan revealed slightly less than normal liver activity, mild bone marrow activity, and splenomegaly. This is compatible with hepatocellular disease, probably not metastatic disease.

Pulmonology Opinion

Dr. Giglia: The panel agreed that the patient should be tested for tuberculosis and also checked for anergy with skin tests including mumps, histoplasmosis and candida. These precautions were indicated in view of the patient's decreased immunologic defenses on chemotherapy. The increased episodes of coughing over the past few days could have been due to some relief of the bronchial obstruction due to the chemotherapy, but the patient was encouraged to advise her physician of the increased coughing and fever.

The panel also agreed that the patient should quit smoking in an effort to salvage residual lung function and to help reduce the incidence of recurrent pulmonary infection.

Medical Oncology Opinion

Dr. Mendelsohn: Chemotherapy certainly is the best treatment option for this patient, especially in the long term. With limited disease, one could hope for at least a 50% chance of complete remission using the VAC regimen. Still, the two-year survival for patients with this disease is less than twenty percent.

In her case, one must consider chest irradiation within the next few weeks, if her postobstruction does not clear quickly, due to the high risk of sepsis if she becomes neutropenic with remaining obstruction. She should have monthly chest x-ray studies with each cycle of chemotherapy.

She certainly should stop smoking.

Radiation Therapy

Dr. Langston: Radiation therapy is used in the treatment of lung cancer for a number of reasons, and this patient would

* St. Vincent Infirmary Cancer Center, Two St. Vincent Circle, Little Rock, Arkansas 72205.

most benefit from palliative radiotherapy for relief of distressing symptoms. Otherwise, chemotherapy is the treatment of choice for patients with small cell lung cancer.

Consensus

The panel agreed that VAC was an appropriate combination of drugs with which to treat this patient with past liver disease.¹⁻³ The panel members also agreed that a chest x-ray should be taken after each treatment, and if the tumor was not shrinking, the patient should be treated with radiation therapy. They also agreed that the patient should be tested with radiation therapy. They also agreed that the patient should be

tested for tuberculosis and anergy. They further agreed that to stop smoking could only work in the patient's favor.

Acknowledgment

The authors wish to thank Marjorie McMinn for her editorial assistance in the preparation of this manuscript.

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A GREAT WAY TO SERVE

Arkansas Medicine: Historical Gleanings from the National Library of Medicine Collections

John Parascandola, M.D.*

Editor's Note: Dr. Parascandola was the guest speaker at the fifth History of Medicine Associates Dinner, November 6, 1986, which was a part of the University of Arkansas for Medical Sciences' Sesquicentennial Celebration. It was felt that an article about Arkansas' medical history would be of interest and appropriate considering we have not long ago observed our state's sesquicentennial and, more recently, marked the 200th year of the signing of the United States Constitution.

One might call this presentation a tale of two sesquicentennials. For 1986 marks the 150th birthday of Arkansas' statehood as well as the 150th anniversary of the founding of the National Library of Medicine (NLM). It therefore seems particularly appropriate to link the two celebrations by discussing some of NLM's resources in the history of Arkansas medicine.

It may seem like carrying coals to Newcastle for me to come to Arkansas to discuss Arkansas medicine, a subject in which I do not pretend to any expertise. Certainly the richest resources for the study of Arkansas medicine are right here in the state. Yet the NLM collection does contain a surprisingly large amount of material documenting the history of Arkansas medicine, and I thought you might find it interesting to learn about some of these holdings and about some of the things that they can tell us about medicine in your state. I do not intend to recite a long list of bibliographic references. Those who wish more detailed information on NLM's holdings in this area are invited to write to me with their specific inquiries. Here I wish only to discuss some representative examples which I feel are especially interesting and sometimes amusing.

My focus will be on materials from the late nineteenth century representing Arkansas medicine of about one hundred year's ago. To trace the early history of Arkansas medicine, before there were societies and their published

proceedings, medical journals, and the like requires the kind of local history manuscript materials available largely only in Arkansas itself. Beginning with the post-Civil War period, however, NLM's holding on Arkansas medicine are substantial.

One cannot talk about the history of Arkansas medicine without mentioning Hot Springs. The NLM collection abounds in literature related to Hot Springs. In the section on mineral waters in the first series of the Index Catalogue of the Library of the Surgeon General's Office (forerunner of the NLM), for example, there are recorded 31 individual monographs and pamphlets and 18 journal articles on the waters of Hot Springs which were in the Library when the volume was published in 1895.

One of the most interesting of these items is Cutter's Guide to the Hot Springs of Arkansas. The Library has many editions of this work, including the first, which was published in 1874 under the title The Hot Springs as They Are: A History and Guide and sold for fifty cents a copy. Charles Cutter, the author, operated a firm in Hot Springs which handled real estate, employment, and tourist services.

I have chosen to discuss the attractively illustrated 24th edition of this guide, published in 1889, as representative of the genre. Cutter informs his readers that the Hot Springs of Arkansas are one of the wonders of the world, and that seekers of pleasure and lovers of sight-seeing, as well as those in search of health, will be rewarded by a visit to the Springs. No other medicinal springs in the world can rival, he boasts, the curative powers of Arkansas' Hot Springs. He claims that within the

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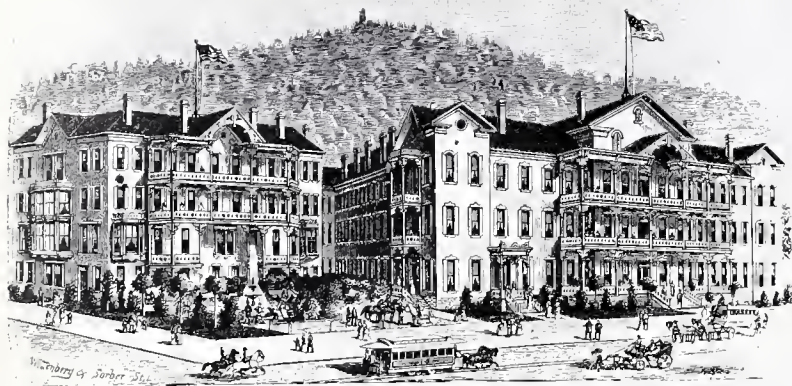


Figure 1. *The Arlington Hotel, Hot Springs. From Charles Cutter, Cutter's Guide to the Hot Springs of Arkansas, 24th edition, 1889.*

past ten years the Springs have cured over 30,000 people of diseases that the most skilled physicians considered incurable. Without bothering to cite the basis for his figures, Cutter estimates that ninety out of one hundred invalids who visit the Springs are cured.

The Springs apparently had moral as well as medicinal virtues, for Cutter states that no one can visit them without receiving a good moral lesson. He adds, "Parents would do well to send their wild boys to this school. If they would not learn wisdom here there is but little hope of preventing their sowing wild oats."

Among the diseases which Cutter feels can be cured or ameliorated by the Springs are gout, paralysis, syphilis, asthma, psoriasis, chronic ulcers, ring worm, migraine, menstruation problems, and sterility. In addition, he notes that ladies have found that the Springs help them to renew the beauty of youth and to regain a fair and clear complexion. "Ladies need have no delicacy in visiting the Springs; that day is past and the time will soon come when Hot Springs will not only be an invalid's retreat, but a fashionable watering place, and could be one of the prettiest in the land."

But Cutter gives his readers a stern warning that they should not bathe in the waters without first seeking the advice of a knowledgeable physician. For the waters are strong, and some people actually suffer ill effects by bathing for too long a time, in water too hot a temperature, and so forth.

Bathers had their choice of eleven bathing establishments along Bath House Row. In Cutter's view, these were the finest bath houses in the United States. Prices ranged from fifteen to forty cents for a single bath. The prices were regulated by the Secretary of the Interior as the bath houses were on the government reservation. For those who could not afford the luxury of the bath house, the federal government maintained free bathing pools.

Naturally Hot Springs had many first class hotels in which to lodge visitors, and Cutter describes some of these establishments. Among the more luxurious of these is the Arlington

Hotel (Figure 1), which could house 350 guests at a rate of \$17.50 to \$21.00 per person per week for room and board.

The federal government also erected an Army and Navy Hospital at Hot Springs, to take advantage of the therapeutic qualities of the water. Cutter includes an engraving of the hospital (cover photo), though he admits that he took the liberty of having his artist "lay out and beautify the grounds" surrounding the hospital, trusting that the government would take steps to carry out this plan, or one equally handsome. He regrets, however, that the improvements recently made by the government, though substantial, do not equal his artist's design.

Fascinating as Cutter's guide is, we must leave it now and turn our attention to other subjects. Mention of the Army and Navy Hospital reminds me to note that the National Library of Medicine has a collection of pictures related to the Hospital in its prints and photographs collection. This collection includes a few views of the Hospital depicted by Cutter, and a larger number of pictures of the Army and Navy Hospital which replaced it at the same location. The Library also has a number of World War I photographs from military hospitals in Arkansas, such as the Army Station Hospital at Camp Joseph T. Robinson in Little Rock (Figure 2).

Let us now consider some of the other types of literature on Arkansas medicine in the NLM collection. There were various efforts to establish medical societies in Arkansas in the pre-Civil War period, including the establishment of a short-lived state society in 1845. The first of these for which NLM has any published record, however, was the state medical association founded in 1870. A few years later this society was disbanded, and then the present Arkansas Medical Society was created in 1875.

If we examine the proceedings of that ill-fated society founded in 1870, we see that the organizational meeting was held in Little Rock on November, 1870. The society was founded, according to one of its members, to protect regular physicians against "ignorant pretenders" (a concern not uncommonly voiced by physicians in this period) and to provide



Figure 2. *An appendectomy at the U. S. Army Station Hospital, Camp Joseph T. Robinson, Little Rock, World War I period. From the prints/photographs collection, National Library of Medicine.*

a medium for "pleasant and instructive interchange of thought."

The organizational meeting was followed by a dinner at the Pacific Hotel, attended by about forty guests. We are told that they made "brave inroads" on the oysters and wine, but could not demolish the supply. In addition, samples of pure liquors sent by dealers for inspection (for medicinal purposes, of course) were tried and fully approved. Some seven toasts were made, and more "medicinal" wines and whiskeys were sampled, but the report of the dinner concluded: "It is proper to say that though wine and harmless hilarity were the order of the hour at the table, yet moderation in the midst of abundance was an equally marked feature; and we imagine that no man there waked this morning with a headache or heartache resulting from the occasion."

Let us leave our happy dinner bunch of 1870 to move to the 1890s for a look at some of the early volumes of the Journal of the Arkansas Medical Society. Here I want to focus on another kind of literature from which we can learn something of the medicine of the period, namely the advertisements. Advertising is often overlooked as a source of information on medical history, and sometimes advertising sections of journals are discarded by libraries when the journals are bound. Fortunately NLM's copy of the Journal of the Arkansas Medical Society contains the original advertisements.

I have chosen one volume, the third (1892-1893), to focus on for purposes of our discussion. Even the covers of the issues contained advertisements. For example, the cover of the April 15, 1893 issue advertises a product called Glycozone, which supposedly prevented fermentation in the stomach and cured dyspepsia, gastritis, stomach ulcers, and heartburn. There are other ads for products that would strike us as excessive in their claims; for example, Neurosine, a purported remedy for the relief of hysteria, epilepsy, chorea, delirium, migraine, neuralgia, and other nervous afflictions.

In some cases these advertisements merely reflect the state of medical knowledge of the time. In other cases, however, they would probably qualify as medical quackery even by the

standard of the day, and serve as a reminder that in the late nineteenth century even respected medical journals frequently carried ads for nostrums and quack devices. The Arkansas journals that I examined for this period, such as the above-mentioned Journal and the Arkansas Medical Monthly, actually do not fare badly in this respect, containing relatively few ads for patently quackish products. Figure 3 is an advertisement for Antikamnia, a medication which was attacked by the American Medical Association.

Returning to the advertisements in the third volume of the Journal of the Arkansas Medical Society, we find that ads for sanatoria for various disease were common. For example, there are advertisements for the Milwaukee Sanitarium (for nervous and mental disease), Dr. Crofford's Sanitarium (for diseases of women), the Cincinnati Sanitarium (for mental and nervous disorders, including the opium habit), and the Gasconade (for chronic invalids). More research by medical historians is needed to clarify the role of these institutions in the health care of the late nineteenth century.

Various medical colleges also advertised in the Journal. Again these advertisements can be a useful source of information about the many medical colleges in the United States in this period when the reform of medical education was beginning to get underway. Among the colleges which advertised in the 1892-1893 volume were the Baltimore Medical College, the College of Physicians and Surgeons of Baltimore, the Memphis Hospital Medical College, and the Medical Department of the Arkansas Industrial University. The latter institution, established in Little Rock in 1879 with 22 students as the state's first medical school, is of course, the forerunner of the University of Arkansas for Medical Sciences. Incidentally, the NLM collection does contain the early catalogs of the Medical Department of the Arkansas Industrial University.

We turn now to another type of publication, the report of the Arkansas Board of Health. The first report of the Board covers the period from its organization on April 27, 1881 to December 1, 1882, and was published in 1883. What were some of the issues that concerned the Board during the first couple of years of its existence, at least as reflected in its published report? One of the Board's chief concerns was to encourage communities to establish local boards of health and require the registration of births and deaths. The State Board was charged with keeping vital statistics, but recognized that this would be a hopeless task without the cooperation of local authorities.

Another issue that came before the Board was a letter from the Secretary of the Tennessee State Board of Health expressing concern about the prevalence of smallpox and yellow fever in Vera Cruz, Mexico. The Secretary was afraid that the diseases might spread to Galveston, Texas and then be transported through Arkansas to Tennessee. He inquired as to whether the Arkansas Board of Health had "adopted any precautionary measures to prevent or guard against such a serious contingency," although he assured the Board that he had no idea of "advising or dictating your policy." The Secretary of the Arkansas Board replied that no such meas-



Figure 3. An advertisement for Antikamnia, an acetanilid-containing patent medicine which came under attack by the AMA. From the Journal of the Arkansas Medical Society, May 15, 1893.

ures had been taken, other than to join with the State Boards of Tennessee and Illinois in inviting the National Board of Health to place "inspectors" anywhere within the territory of these states that might be deemed necessary for the protection of the people against the invasion of infectious disease. He added that the Arkansas Board could hardly with good grace invite the National Board to place inspectors at Galveston, and suggested that the inquiry of the Tennessee Board might more properly be directed to the health authorities at Galveston.

Other issues that occupied the attention of the Board of Health in 1881-1882 included approval of a request from Little Rock to have the Board arrange for an analysis of the water with which the Home Water Company proposed to supply the city, and a recommendation to the state legislature to adopt a bill to prevent the adulteration of foods and drugs.

My final example of Arkansas material from the NLM collection is the report of the Board of Directors and Officers of the Arkansas Deaf Mute Institute. The Institute was begun

in 1867 as a school for the deaf supported by the city of Little Rock, but was soon converted into a state institution. In the first report, for 1869-1870, the Principal emphasized that the purpose of the Institute was the education of the deaf, for there was no cure for deafness. The reports contain much of medical interest, however. In the first report, for example, the physician to the Institute discusses the causes of deafness, both congenital and acquired. He gives a list of the pupils at the Institute, along with the presumed cause of their deafness. These causes include the use of quinine (cited in several cases), scarlet fever, falling down the stairs, and the explosion of a cannon. Figure 5 illustrates the manual alphabet from a report of the Institute.

We have now reached the end of our whirlwind tour of some of the resources on Arkansas medical history in the NLM collection. Hopefully this brief discussion has illustrated the diversity of these resources, and provided some informative and entertaining glimpses into the Arkansas medicine of a century ago.



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Before prescribing, see complete prescribing information in SK&F CO. literature or PDR. The following is a brief summary.

WARNING

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. Associated widened QRS complex or arrhythmia requires prompt additional therapy. Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.

Precautions: The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity. Theoretically, a patient transferred from the single entities of triamterene and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Angiotensin-converting enzyme (ACE) inhibitors can elevate serum potassium; use with caution with 'Dyazide'. Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin [ACTH]). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is uncommon with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function. Thiazides may add to or potentiate the action of other antihypertensive drugs. Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth, anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and respiratory distress including pneumonitis and pulmonary edema, transient blurred vision, sialadenitis, and vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with other usual calculus components. Rare incidents of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.

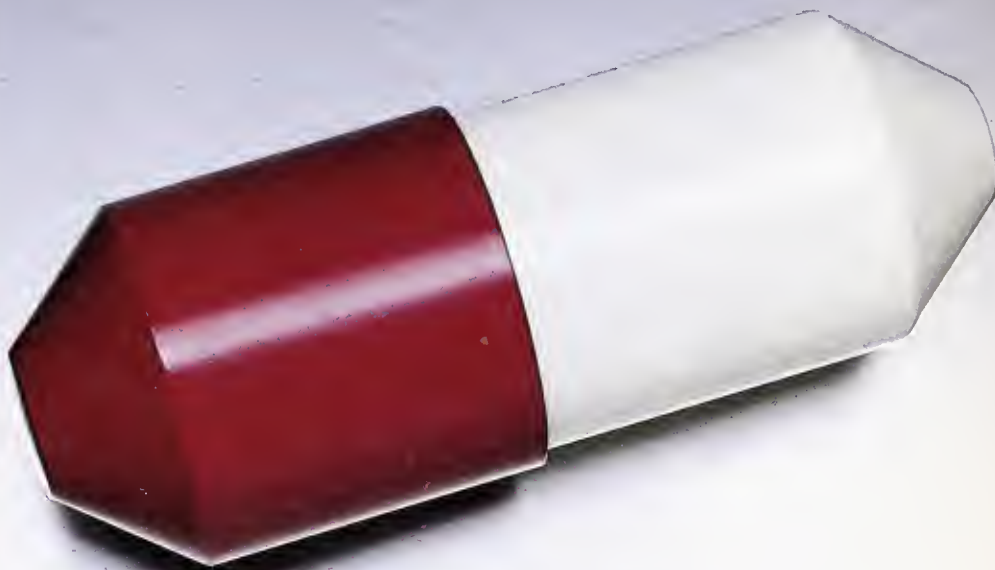
Supplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 1000 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only); in Patient-Pak™ unit-of-use bottles of 100.

BRS-DZ-L42

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Serum K^+ and BUN should be checked periodically (see Warnings and Precautions).



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**Proven benefits beyond relief
of vasomotor symptoms**

**No other estrogen proven
effective for osteoporosis**

Only conjugated estrogens tablets have established efficacy in both osteoporosis¹ and vasomotor symptoms* at 0.625 mg/day. No other estrogen, oral or transdermal, has established clinical evidence or minimum effective dose in both indications.

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PREMARIN is the most extensively tested estrogen, with an unsurpassed record of long-term safety. And clinical evidence shows a significantly reduced risk of endometrial hyperplasia when cycled with a progestin.²

PREMARIN[®]
(conjugated estrogens tablets)

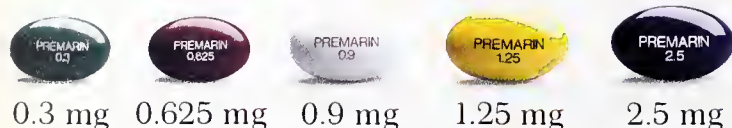
Most trusted for more reasons

*PREMARIN is indicated for moderate-to-severe vasomotor symptoms.

Please see following page for brief summary
of prescribing information.

For moderate-to-severe
vasomotor symptoms and
for osteoporosis

PREMARIN® (conjugated estrogens tablets)



The appearance of these tablets is a trademark of Ayerst Laboratories.

BRIEF SUMMARY (FOR FULL PRESCRIBING INFORMATION AND PATIENT INFORMATION, SEE PACKAGE CIRCULARS)

PREMARIN® Brand of conjugated estrogens tablets, USP

PREMARIN® Brand of conjugated estrogens Vaginal Cream, in a nonliquefying base

1. ESTROGENS HAVE BEEN REPORTED TO INCREASE THE RISK OF ENDOMETRIAL CARCINOMA

Three independent, case-controlled studies have reported an increased risk of endometrial cancer in postmenopausal women exposed to exogenous estrogens for more than one year. This risk was independent of the other known risk factors for endometrial cancer. These studies are further supported by the finding that incidence rates of endometrial cancer have increased sharply since 1969 in eight different areas of the United States with population-based cancer reporting systems, an increase which may be related to the rapidly expanding use of estrogens during the last decade. The three case-controlled studies reported that the risk of endometrial cancer in estrogen users was about 4.5 to 13.9 times greater than in nonusers. The risk appears to depend on both duration of treatment and on estrogen dose. In view of these findings, when estrogens are used for the treatment of menopausal symptoms, the lowest dose that will control symptoms should be utilized and medication should be discontinued as soon as possible. When prolonged treatment is medically indicated, the patient should be reassessed on at least a semi-annual basis to determine the need for continued therapy. Although the evidence must be considered preliminary, one study suggests that cyclic administration of low doses of estrogen may carry less risk than continuous administration, it therefore appears prudent to utilize such a regimen. Close clinical surveillance of all women taking estrogens is important. In all cases of undiagnosed persistent or recurring abnormal vaginal bleeding, adequate diagnostic measures should be undertaken to rule out malignancy. There is no evidence at present that "natural" estrogens are more or less hazardous than "synthetic" estrogens at equi-estrogenic doses.

2. ESTROGENS SHOULD NOT BE USED DURING PREGNANCY

The use of female sex hormones, both estrogens and progestogens, during early pregnancy may seriously damage the offspring. It has been shown that females exposed in utero to diethylstilbestrol, a nonsteroidal estrogen, have an increased risk of developing, in later life, a form of vaginal or cervical cancer that is ordinarily extremely rare. This risk has been estimated as not greater than 4 per 1,000 exposures. Furthermore, a high percentage of such exposed women (from 30% to 90%) have been found to have vaginal adenosis, epithelial changes of the vagina and cervix. Although these changes are histologically benign, it is not known whether they are precursors of malignancy. Although similar data are not available with the use of other estrogens, it cannot be presumed they would not induce similar changes. Several reports suggest an association between intrauterine exposure to female sex hormones and congenital anomalies, including congenital heart defects and limb-reduction defects. One case-controlled study estimated a 4.7-fold increased risk of limb-reduction defects in infants exposed in utero to sex hormones (oral contraceptives, hormone withdrawal tests for pregnancy, or attempted treatment for threatened abortion). Some of these exposures were very short and involved only a few days of treatment. The data suggest that the risk of limb-reduction defects in exposed fetuses is somewhat less than 1 per 1,000. In the past, female sex hormones have been used during pregnancy in an attempt to treat threatened or habitual abortion. There is considerable evidence that estrogens are ineffective for these indications, and there is no evidence from well-controlled studies that progestogens are effective for these uses. If PREMARIN is used during pregnancy, or if the patient becomes pregnant while taking this drug, she should be apprised of the potential risks to the fetus, and the advisability of pregnancy continuation.

DESCRIPTION: PREMARIN (conjugated estrogens, USP) contains a mixture of estrogens, obtained exclusively from natural sources, blended to represent the average composition of material derived from pregnant mares' urine. It contains estrone, equilin, and 17 α -dihydroequilin, together with smaller amounts of 17 α -estradiol, equilenin, and 17 α -dihydroequilenin as salts of their sulfate esters. Tablets are available in 0.3 mg, 0.625 mg, 0.9 mg, 1.25 mg, and 2.5 mg strengths of conjugated estrogens. Cream is available as 0.625 mg conjugated estrogens per gram.

INDICATIONS AND USAGE: PREMARIN (conjugated estrogens tablets, USP): Moderate-to-severe vasomotor symptoms associated with the menopause. (There is no evidence that estrogens are effective for nervous symptoms or depression without associated vasomotor symptoms and they should not be used to treat such conditions.) Osteoporosis (abnormally low bone mass). Atrophic vaginitis. Kraurosis vulvae. Female castration.

PREMARIN (conjugated estrogens) Vaginal Cream is indicated in the treatment of atrophic vaginitis and kraurosis vulvae.

PREMARIN HAS NOT BEEN SHOWN TO BE EFFECTIVE FOR ANY PURPOSE DURING PREGNANCY AND ITS USE MAY CAUSE SEVERE HARM TO THE FETUS (SEE BOXED WARNING).

Concomitant Progestin Use: The lowest effective dose appropriate for the specific indication should be utilized. Studies of the addition of a progestin for 7 or more days of a cycle of estrogen administration have reported a lowered incidence of endometrial hyperplasia. Morphological and biochemical studies of the endometrium suggest that 10 to 13 days of progestin are needed to provide maximal maturation of the endometrium and to eliminate any hyperplastic changes. Whether this will provide protection from endometrial carcinoma has not been clearly established. There are possible additional risks which may be associated with the inclusion of progestin in estrogen replacement regimens (See PRECAUTIONS). The choice of progestin and dosage may be important; product labeling should be reviewed to minimize possible adverse effects.

CONTRAINDICATIONS: Estrogens should not be used in women (or men) with any of the following conditions: 1. Known or suspected cancer of the breast except in appropriately selected patients being treated for metastatic disease. 2. Known or suspected estrogen-dependent neoplasia. 3. Known or suspected pregnancy (see Boxed Warning). 4. Undiagnosed abnormal genital bleeding. 5. Active thrombophlebitis or thromboembolic disorders. 6. A past history of thrombophlebitis, thrombosis, or thromboembolic disorders associated with previous estrogen use (except when used in treatment of breast or prostatic malignancy).

WARNINGS: Estrogens have been reported to increase the risk of endometrial carcinoma (see Boxed Warning). However, a recent large, case-controlled study indicated no increase in risk of breast cancer in postmenopausal women. A recent study has reported a 2- to 3-fold increase in the risk of surgically confirmed gallbladder disease in women receiving postmenopausal estrogens.

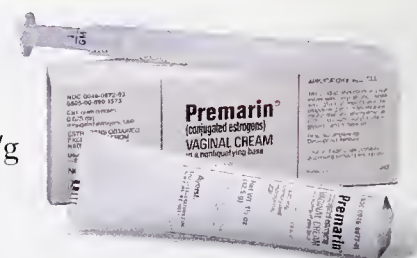
Adverse effects of oral contraceptives may be expected at the larger doses of estrogen used to treat prostatic or breast cancer or postpartum breast engorgement, it has been shown that there is an increased risk of thrombosis in men receiving estrogens for prostatic cancer and women for postpartum breast engorgement. Users of oral contraceptives have an increased risk of diseases, such as thrombophlebitis, pulmonary embolism, stroke, and myocardial infarction. Cases of retinal thrombosis, mesenteric thrombosis, and optic neuritis have been reported in oral contraceptive users. An increased risk of postsurgery thromboembolic complications has also been reported in users of oral contraceptives. If feasible, estrogen should be discontinued at least 4 weeks before surgery of the type associated with an increased risk of thromboembolism, or during periods of prolonged immobilization. Estrogens should not be used in persons with active thrombophlebitis, thromboembolic disorders, or in persons with a history of such disorders in association with estrogen use. They should be used with caution in patients with cerebral vascular or coronary artery disease. Large doses (5 mg conjugated estrogens per day), comparable to those used to treat cancer of the prostate and breast, have been shown to increase the risk of nonfatal myocardial infarction, pulmonary embolism, and thrombophlebitis. When doses of this size are used, any of the thromboembolic and thrombotic adverse effects should be considered a clear risk.

For atrophic vaginitis

PREMARIN® (conjugated estrogens)

Vaginal
Cream

0.625 mg/g



Benign hepatic adenomas should be considered in estrogen users having abdominal pain and tenderness, abdominal mass, or hypovolemic shock. Hepatocellular carcinoma has been reported in women taking estrogen-containing oral contraceptives. Increased blood pressure may occur with use of estrogens in the menopause and blood pressure should be monitored with estrogen use. A worsening of glucose tolerance has been observed in patients on estrogen-containing oral contraceptives. For this reason, diabetic patients should be carefully observed. Estrogens may lead to severe hypercalcemia in patients with breast cancer and bone metastases.

PRECAUTIONS: Physical examination and a complete medical and family history should be taken prior to the initiation of any estrogen therapy with special reference to blood pressure, breasts, abdomen, and pelvic organs, and should include a Papanicolaou smear. As a general rule, estrogen should not be prescribed for longer than one year without another physical examination being performed. Conditions influenced by fluid retention, such as asthma, epilepsy, migraine, and cardiac or renal dysfunction, require careful observation. Certain patients may develop manifestations of excessive estrogenic stimulation, such as abnormal or excessive uterine bleeding, mastodynia, etc. Prolonged administration of unopposed estrogen therapy has been reported to increase the risk of endometrial hyperplasia in some patients. Oral contraceptives appear to be associated with an increased incidence of mental depression. Patients with a history of depression should be carefully observed. Pre-existing uterine leiomyomata may increase in size during estrogen use. The pathologist should be advised of estrogen therapy when relevant specimens are submitted. If jaundice develops in any patient receiving estrogen, the medication should be discontinued while the cause is investigated. Estrogens should be used with care in patients with impaired liver function, renal insufficiency, metabolic bone diseases associated with hypercalcemia, or in young patients in whom bone growth is not yet complete. If concomitant progestin therapy is used, potential risks may include adverse effects on carbohydrate and lipid metabolism.

The following changes may be expected with larger doses of estrogen:

- Increased sulfobromophthalalein retention
- Increased prothrombin and factors VII, VIII, IX, and X, decreased antithrombin 3, increased norepinephrine-induced platelet aggregability
- Increased thyroid binding globulin (TBG) leading to increased circulating total thyroid hormone, as measured by PBI, T_4 by column, or T_4 by radioimmunoassay. Free T_3 resin uptake is decreased, reflecting the elevated TBG; free T_4 concentration is unaltered.
- Impaired glucose tolerance
- Decreased pregnandiol excretion
- Reduced response to meprobamate test
- Reduced serum folate concentration
- Increased serum triglyceride and phospholipid concentration

As a general principle, the administration of any drug to nursing mothers should be done only when clearly necessary since many drugs are excreted in human milk.

Long-term, continuous administration of natural and synthetic estrogens in certain animal species increases the frequency of carcinomas of the breast, cervix, vagina, and liver. However, in a recent, large case-controlled study of postmenopausal women there was no increase in risk of breast cancer with use of conjugated estrogens.

ADVERSE REACTIONS: The following have been reported with estrogenic therapy, including oral contraceptives: breakthrough bleeding, spotting, change in menstrual flow, dysmenorrhea, premenstrual-like syndrome, amenorrhea during and after treatment, increase in size of uterine fibromyomata, vaginal candidiasis, change in cervical erosion and in degree of cervical secretion, cystitis-like syndrome, tenderness, enlargement, secretion (of breasts), nausea, vomiting, abdominal cramps, bloating, cholestatic jaundice, chloasma or melasma which may persist when drug is discontinued, erythema multiforme, erythema nodosum, hemorrhagic eruption, loss of scalp hair, hirsutism, steepening of corneal curvature, intolerance to contact lenses, headache, migraine, dizziness, mental depression, chorea, increase or decrease in weight, reduced carbohydrate tolerance, aggravation of porphyria, edema, changes in libido.

ACUTE OVERDOSAGE: May cause nausea, and withdrawal bleeding may occur in females.

DOSEAGE AND ADMINISTRATION:

PREMARIN® Brand of conjugated estrogens tablets, USP

1. *Given cyclically for short-term use only.* For treatment of moderate-to-severe vasomotor symptoms, atrophic vaginitis, or kraurosis vulvae associated with the menopause (0.3 mg to 1.25 mg or more daily). The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible. Administration should be cyclic (eg, three weeks on and one week off). Attempts to discontinue or taper medication should be made at three- to six-month intervals.

2. *Given cyclically.* Osteoporosis. Female castration. Osteoporosis—0.625 mg daily. Administration should be cyclic (eg, three weeks on and one week off). Female castration—1.25 mg daily, cyclically. Adjust upward or downward according to response of the patient. For maintenance, adjust dosage to lowest level that will provide effective control.

Patients with an intact uterus should be monitored for signs of endometrial cancer and appropriate measures taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

PREMARIN® Brand of conjugated estrogens Vaginal Cream

Given cyclically for short-term use only. For treatment of atrophic vaginitis or kraurosis vulvae.

The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible.

Administration should be cyclic (eg, three weeks on and one week off).

Attempts to discontinue or taper medication should be made at three- to six-month intervals.

Usual dosage range: 2 g to 4 g daily, intravaginally, depending on the severity of the condition.

Treated patients with an intact uterus should be monitored closely for signs of endometrial cancer and appropriate diagnostic measures should be taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

References:

- Lindsay R, Hart OM, Clark DM. The minimum effective dose of estrogen for prevention of postmenopausal bone loss. *Obstet Gynecol* 1984;63:759-763.
- Studd JWW, Thom MH, Paterson MEL, et al. The prevention and treatment of endometrial pathology in postmenopausal women receiving exogenous estrogens, in Pasetto N, Paoletti R, Ambrus JL (eds): *The Menopause and Postmenopause*. Lancaster, England, MTP Press Ltd, 1980, chap 13.

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THINGS TO COME

NOVEMBER 5-6

Advanced Applied Ultrasound in Obstetrics Seminar. Sponsored by the Center for Medical Ultrasound, Bowman Gray School of Medicine. Registry Resort Hotel, Naples, Florida. 12 hours Category I credit. Fee: \$375. Further information: Ultrasound Center, Bowman Gray School of Medicine, 300 S. Hawthorne Rd., Winston-Salem, NC 27103, (919) 748-4505.

NOVEMBER 30-DECEMBER 6

Fourth Annual Doppler and 2-D Echocardiography Seminar. Sponsored by the Institute for Medical Studies. San Francisco, CA. 40 hours Category I credit available. Further information: Lisa Krehbiel, 30131 Town Center Drive, #215, Laguna Niguel, CA 92677, (714) 495-4499.

DECEMBER 1-3

Cardiology Update. Sponsored by the Institute for Medical Studies. The Hotel-Inter-Continental, Houston, TX. 12 Category I credit hours available. Further information: Lisa Krehbiel, Institute for Medical Studies, 30131 Town Center Dr., St. 215, Laguna Niguel, CA 92677; (714) 495-4499.

DECEMBER 3-4

Surgical Health Policy and Finance. Sponsored by the Department of Surgery, Long Island Jewish Medical Center. The Waldorf Astoria, New York, NY. Fourteen Category I credit hours. Fee: \$200, residents; \$400, all others. Further information: Ann J. Boehme, Long Island Jewish Medical Center, New Hyde Park, NY 11042; (718) 470-8650.

DECEMBER 7-11

Noninvasive Vascular Diagnosis by Doppler Ultrasound. Sponsored by the Institute for Medical Studies. Washington, D.C. Up to 30 Category I credit hours available. Further information: Lisa Krehbiel, Institute for Medical Studies, 30131 Town Center Dr., Suite 215, Laguna Niguel, CA 92677: (714) 495-4499.

DECEMBER 8-10

Cardiology Update. Sponsored by the Institute for Medical Studies. The McCormick Center Hotel, Chicago, IL. Up to 12 hours Category I credit available. Further information: Lisa Krehbiel, Institute for Medical Studies, 30131 Town Center Dr., Suite 215, Laguna Niguel CA 92677; (714) 495-4499.

KEEPING UP

Cholesterol: Current Concepts for Physicians

Self Study course for physicians. Sponsored by the National Health, Lung and Blood Institute. A national cholesterol education program available through the Arkansas Medical Society office. Physicians study at home and are required to pass a test. Two hours Category I credit. Further information: David Wroten, Arkansas Medical Society, P. O. Box 5776, Little Rock, AR 72215; (501) 224-8967.

Helping the Post MI Patient

October 22, 12:30 p.m. Presented by Russell Williams, MSW. Sponsored by the AHEC Fort Smith. Sparks Regional Medical Center. One hour Category one credit.

Primary Care Update

October 22 and October 23. Sponsored by the Baptist Medical Center. Little Rock Hilton Inn. For further information contact: BMC's Medical Education Department, (501) 227-2672.

AMS Impaired Physician Program

October 24, 8:00 a.m. - 10:00 a.m. Presented and sponsored by AHEC - Northwest. Washington Regional Medical Center, Fayetteville. CME credit available. Further information: Lee B. Parker, MD., 241 West Spring St., Fayetteville, (501) 521-8269.

Hypertensive Drugs

October 28, 12:30 p.m. Presented by Charles C. Marsh, Pharm.D. Sponsored by AHEC Fort Smith. Sparks Regional Medical Center. One hour Category I credit.

AMS AIDS Program

November 7, 8:00 a.m. - 10:00 a.m. Presented and sponsored by AHEC - Northwest. Washington Regional Medical Center, Fayetteville. CME credit available. Further information: Lee B. Parker, M.D., 241 West Spring, Fayetteville, AR; (501) 521-8269.

Clinical Focus on AIDS: Statewide Symposium

November 12, 7:30 a.m. - 4:30 p.m. Presented by Terry Yamauchi, M.D. Sponsored by UAMS Office of Continuing Education for Physicians. University Conference Center, #5 Statehouse Plaza, Little Rock. Six Category I credit hours. Fee: \$60, physicians; \$30, other health care professionals.

Infectious Diseases in Children

November 17, 12:00 noon. Presented by Russell Steele, M.D. Sponsored by AHEC - Fort Smith. Sparks Regional Medical Center, Fort Smith. One Category I credit hour.

Annual Conference on Perinatal Care

November 19-20, 7:30 a.m. - 5:00 p.m. Presented by Frank C. Miller, M.D., Julie West, R.N.C., and Julie

Roberts, R.N.P. Sponsored by the University of Arkansas College of Medicine. Great Hall, Camelot Hotel, Little Rock. Twelve and one-half Category I credit hours. Fee: \$75, physicians; \$40, other health care professionals.

Pediatric Pneumonias

November 24, 7:00 p.m. Presented by Terry Yamauchi, M.D., Arkansas Children's Hospital. Sponsored by Baxter County Regional Hospital. Education Building, Baxter County Regional Hospital, Mountain Home. Two Category I credit hours. Pizza & pasta buffet at 6:30 p.m.

AIDS

December 1, 7:00 p.m. Presented by Terry Yamauchi, M.D. Sponsored by AHEC - Northwest. Park Inn, Fayetteville. One hour Category I credit. Dutch treat buffet.

ATLS Provider Course

December 5, 8:00 a.m. - 7:00 p.m. and December 6, 8:00 a.m. - 4:00 p.m. Presented by Robert W. Barnes, M.D., and Charles D. Mabry, M.D. Sponsored by the UAMS Office of Continuing Education for Physicians. UAMS Education Building, Little Rock. Sixteen Category I credit hours. Fee: \$425.

Ultrasound Update 1987

December 12, 7:30 a.m. - 5:00 p.m. Presented by Terry Angtuaco, M.D. Sponsored by UAMS Office of Continuing Education for Physicians. UAMS Education Building, Room G131A/B, Little Rock. 7 Category I credit hours. Fee: \$75, physicians; \$25, technicians.

Cystic Fibrosis

December 15, 12:30 p.m. Presented by Louay Nassri, M.D. Sponsored by AHEC - Fort Smith. Sparkes Regional Medical Center. 1 Category I credit hour.

Recurring Education Programs

EL DORADO - AHEC

Behavioral Sciences Conference, first and fourth Friday, 12:15 p.m., AHEC - South Arkansas.
Chest Conference, third Wednesday, 12:30 p.m., Warner Brown Hospital
Fracture Conference, third Tuesday, 12:15 p.m., AHEC-South Arkansas
Gynecology-Pathology Conference, second Friday, 12:15 p.m., AHEC-South Arkansas
Internal Medicine Conference, first, second and fourth Wednesday, 12:15 p.m., AHEC-South Arkansas
Pathology Conference, second Tuesday, 12:15 p.m., AHEC-South Arkansas
Pharmacology Conference, second Thursday, 12:15 p.m., AHEC-South Arkansas
Obstetrics-Gynecology Conference, fourth Thursday, 12:15 p.m., AHEC-South Arkansas
Surgical Conference, first, second and third Monday, 12:15 p.m., AHEC-South Arkansas
Tumor Clinic, fourth Tuesday, 12:15 p.m., AHEC-South Arkansas

FAYETTEVILLE - AHEC NORTHWEST

City Hospital Staff Meeting, second Friday, 12:00 noon, Fayetteville City Hospital
Medicine Teaching Conference, first, third and fifth Friday, 1:00 p.m., AHEC - NW, 241 W. Spring, Fayetteville

Nephrology Lecture Series, fourth Thursday, 12:30 p.m., AHEC- NW, 241 W. Spring, Fayetteville
Rheumatology Lecture Series, first Tuesday, 12:30 p.m., VA Medical Center.

FAYETTEVILLE - VA MEDICAL CENTER

Medical Conference (varying topics), each Wednesday, 12:15 p.m., 3A Conference Room
Pathology/Mortality Conference, each Friday, 12:30 p.m., 3A Conference Room

FORT SMITH-AHEC

Neurology Conference, second Thursday, 12:30 noon, Sparks Regional Medical Center

HOT SPRINGS-AMI NATIONAL PARK MEDICAL CENTER

Continuing Medical Education Luncheon for Medical/Dental Staff, varying topics, second and fourth Friday, 12:30 p.m., Classrooms, AMI National Park Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, first and third Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Annex Building
Arkansas Methodist Hospital CME Conference, last Friday, 7:00 a.m., Arkansas Methodist Hospital, Paragould
Cherokee Village Tumor Conference, third Monday, 6:00 p.m., Ozark Baptist Memorial Hospital, Cherokee Village, every four months.
Chest Conference, fourth Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room
Independence County Medical Society, second Tuesday, 7:30 p.m., White River Medical Center, Batesville
Interesting Case Conference, second and fifth Tuesday, when applicable, 12:00 noon, St. Bernard's Dietary Conference Room
Kennett Tumor Conference, second Tuesday (every other month), 12:00 noon, Twin Rivers Regional Medical Center, Kennett, Mo.
Methodist Hospital of Jonesboro CME Staff Conference, second Tuesday, 7:30 p.m., Cafeteria, Methodist Hospital of Jonesboro
Monthly Medical Lecture Series, third Tuesday, 7:30 p.m., rotates each month between Walnut Ridge and Pocahontas
Newport Tumor Conference, second Wednesday, 12:00 noon, rotates each month between Harris Clinic and Newport Hospital
Perinatal Conference, second Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Piggott Tumor Conference, third Wednesday, 12:00 noon, Piggott Hospital, every four months.
Poplar Bluff Tumor Conference, third Wednesday, 12:00 noon, Lucy Lee Hospital, Poplar Bluff.
Tumor Conference, fourth Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Wynne Tumor Conference, third Monday, 6:00 p.m., Grecian Steak House, Wynne, every four months.

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Alternating Sub-Specialty Conference, third Wednesday, 12:00 noon, Second Floor Classroom
General Pediatrics Seminar, first and third Friday, 12:00 noon, Second Floor Classroom
Genetics Conference, each Wednesday, 12:00 noon, Sturgis Building, Room 457
Infectious Disease Conference, second Wednesday, 12:00 noon, Sturgis Building, Room 121
Metabolic Neurology Conference, first Wednesday, 1:00 p.m., Polly R. Thomas, Conference Room
Pediatric Grand Rounds, each Tuesday, 8:00 a.m., Sturgis Building, Auditorium
Pediatric Neuropsychiatry Conference, second Wednesday, 1:30 p.m., Polly R. Thomas Conference Room
Pediatric Neuroscience Conference, first Thursday, 8:00 a.m., Second Floor Classroom
Pediatric Pathology Conference, first Wednesday, 12:00 noon, Second Floor Classroom
Pediatric Pharmacology Conference, fifth Wednesday when applicable, 12:00 noon, Second Floor Classroom
Pediatric Radiology Conference, first and third Thursday, 12:00 noon, Second Floor Classroom
Pediatric Research Conference, third Monday, 12:00 noon, Second Floor Classroom
Problem Case Conference, second and fourth Friday, 12:00 noon, Second Floor Classroom

LITTLE ROCK-ST. VINCENT INFIRMARY

Cancer Conference, first Wednesday, 12:00 noon, CARTI Auditorium. A meal is provided.
Cancer Conference, third and fourth Thursday, 12:00 noon, Room S1174K, Lab. A meal is provided.
General Medicine Journal Club, each Tuesday, 12:00 noon, Medical Affairs Conference Room. Bring your lunch.
Hematology-Oncology Conference, second Thursday, 12:00 noon, Laboratory Library. A meal is provided.
Interhospital Urology Grand Rounds, first Tuesday, 5:30 p.m., Classroom 1, Education Wing. Refreshments are provided.
Neuropathology Conference, third Tuesday, 5:00 p.m., Room S1174K, Laboratory. Refreshments are provided.
Pediatric Conference, first Tuesday, 12:30 p.m., Classroom I, Education Wing. A meal is provided.
Peripheral Vascular Disease Conference, third Tuesday, 6:00 p.m., Classroom 1, Education Wing. A meal is provided.
Pulmonary Conference, second and fourth Wednesday, 12:00 noon, Classroom 1, Education Wing. A meal is provided.

LITTLE ROCK-UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

ACRC/CARTI Tumor Conference, each Wednesday, 12:00 noon, CARTI, Markham & University
ACRC Oncology Forum, fourth Thursday, 4:00 p.m., UAMS Education Building, Room G137
Anesthesia Lecture Series, each Wednesday and Thursday, 4:00 p.m., UAMS Education Building, Room G/110 A&B
Anesthesia Morbidity and Mortality Conference, each Tuesday, 6:45 a.m. (Wednesday afternoon only during last week of the month at 4:00 p.m.), UAMS Education Building, Room G/110 A&B
Interdisciplinary Gynecologic Cancer Conference, each Friday, 12:30 p.m., UAMS Education Building, Room G106 A&B
Medicine Grand Rounds, each Thursday, 12:15 p.m., UAMS Shorey Auditorium.
Medicine Research Conference, each Tuesday, 8:00 a.m., UAMS Shorey Building Room 8/105
Neurology Clinical Case Conference, three Thursdays per month, 8:00 a.m. Rotates between UAMS (7D33) and LRVAMC (3S) and ACH.
Neuropathology Conference, every Tuesday, 4:00 p.m. Rotates between UAMS (Shorey Building, 4th floor) and LRVAMC (Autopsy Room).

Neuroscience Conference (Basic), second, third, and fourth Monday, 8:00 a.m., UAMS 7D33.
Ob/Gyn Grand Rounds, each Wednesday, 7:30 a.m., UAMS Education Building, Room G/131B
Ophthalmology Problem Case Conference, each Thursday, 4:00 p.m., UAMS AAC Eye Clinic, Room 3/150.
Orthopaedic Bibliography Conference, each Tuesday, 8:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Fracture Conference, each Tuesday, 7:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Grand Rounds, each Tuesday, 10:00 a.m., UAMS Education Building, Room B/135
Psychiatry Grand Rounds, each Friday, 11:00 a.m., UAMS Shorey Auditorium
St. Vincent Urology Grand Rounds, first Tuesday, 5:30 p.m., St. Vincent Infirmary, Education Building Room 159
Surgery Grand Rounds, each Monday, 5:00 p.m., UAMS Education Building, Room G/141A
Surgery Review Conference, each Monday, 6:00 p.m., UAMS Education Building, Room G/141A
Urologic Topics (Resident Presentation), once or twice monthly, 5:00 p.m., UAMS
Urology Grand Rounds, twice monthly, 5:00 p.m., VAMC
Urology Morbidity and Mortality Workshop, last Wednesday, UAMS
Uro-Radiology Workshop (Urologic Imaging), first Thursday, 5:00 p.m., UAMS
VA Medical Service Teaching Conference, each Thursday, 8:00 a.m., VAMC, Room 2D109
VA Surgery Grand Rounds, each Thursday, 12:45 p.m., VAMC, Room 2D109
VA Topics in Rehabilitation Medicine, each Thursday, 7:45 a.m., NLRVA Conference Room, Building 89L
VA Weekly Cancer Conference (Surgical Service), each Tuesday, 1:00 p.m., VAMC, Room 2D109

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, third Thursday, 7:00 a.m., Conference Room 1
Grand Rounds Conference, each Wednesday, 12:00 noon, Conference Room 1. Lectures and Case Presentations. A light lunch will be served
Pathology Conference, third Tuesday, 3:00 p.m., Pathology Library. Case Presentations.
Pulmonary Conference, each Tuesday, 12:00 noon, Shuffield Auditorium. Lunch served for \$1.75.
Surgery Conference, each Thursday, 7:30 a.m., Shuffield Auditorium. Lectures and Case Presentations.

PINE BLUFF-AHEC

Behavioral Science Conference, each Thursday, 12:30 p.m., Jefferson Regional Medical Center
Chest Conference, second and fourth Friday, 12:30 p.m., Jefferson Regional Medical Center
Family Practice Conference, fourth Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Internal Medicine Conference, second and fourth Wednesday, 12:30 p.m., Jefferson Regional Medical Center
Obstetrics/Gynecology Conference, second Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Pediatric Conference, third Wednesday, 12:30 p.m., Jefferson Regional Medical Center
Radiology Conference, third Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Southeast Arkansas Medical Lecture Series, third Tuesday, 6:30 p.m., Rosswood County Club. Dinner meeting.
Sub-Specialty Conference, first Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Surgery Conference, first Wednesday, 12:30 p.m., Jefferson Regional Medical Center

TEXARKANA-AHEC

Chest Conference, third Wednesday, 12:30 p.m., St. Michael Hospital
Tumor Conference, first Wednesday, 7:00 a.m., St. Michael Hospital

As organizations accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the organizations named certify that these continuing medical education activities meet the criteria for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

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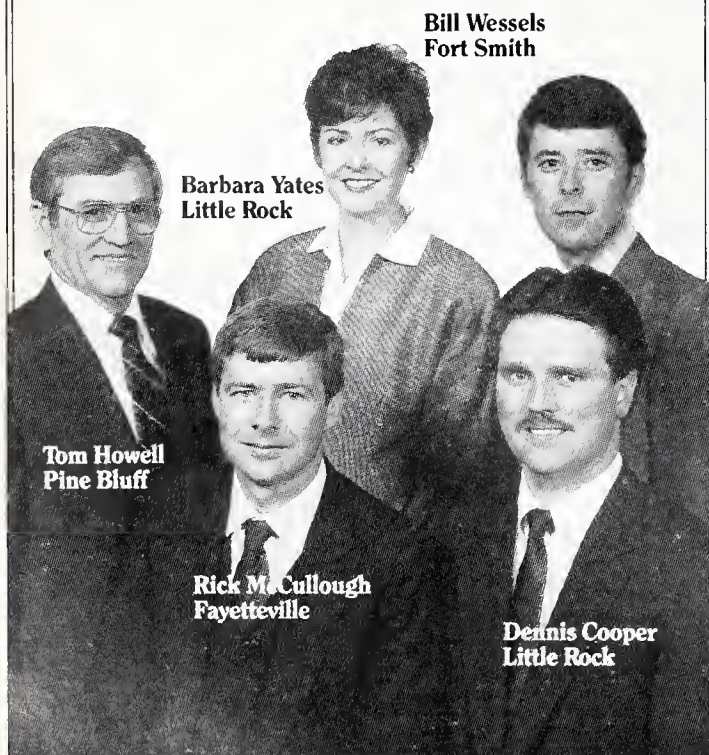
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NEW MEMBERS

PULASKI COUNTY MEDICAL SOCIETY

Brown, Scott H., Internal Medicine, Little Rock. Born June 5, 1957, Little Rock. Pre-medical education, University of Arkansas at Little Rock, B.A., 1980. Medical education, University of Arkansas for Medical Sciences, 1984. Internship/residency, University of Missouri School of Medicine, Kansas City. Board eligible. Member, Jackson County Medical Society, Kansas City, MO.

Duffour, Rory J., Family Practice, North Little Rock. Born February 7, 1957, New Orleans. Pre-medical education, University of New Orleans, B.A. Medical education, Louisiana State University, New Orleans, 1983. Internship/residency, Louisiana State University Medical Center. Board eligible. Member, Orleans Parish Medical Society, New Orleans.

Lea, Allen K., Emergency Medicine, Little Rock. Born March 23, 1957, Fort Sill, OK. Pre-medical education, Baylor University, Waco, TX, B.S., 1979. Medical education, University of Arkansas for Medical Sciences, 1984. Internship/residency, UAMS.

Middaugh, Riley Ann, Ophthalmology, Little Rock. Born February 20, 1956, Little Rock. Pre-medical education, Texas Christian University, Fort Worth, TX, B.S., 1977. Medical education, University of Arkansas for Medical Sciences, 1981. Internship/residency, UAMS. Board eligible.

Morrison, Debra F., Gastroenterology, Little Rock. Born May 22, 1956, Jonesboro. Pre-medical education, Arkansas State University, Jonesboro, B.S., 1977. Medical education, University of Arkansas for Medical Sciences, 1981. Internship/Residency, UAMS. Fellowship (gastroenterology), UAMS. Practice experience, UAMS and John L. McClellan Veterans Hospital. Board certified.

Nagel, Fred G., Family Practice, Little Rock. Born September 23, 1955, Hutchinson, KS. Pre-medical education, Tulane University, New Orleans, 1977. Medical education, University of Arkansas for Medical Sciences, 1984. Internship/Residency, Halifax Hospital Medical Center, Daytona Beach, FL. Board eligible.

Stone, Phillip S., Emergency Medicine. Born June 30, 1951, Holly Grove, AR. Pre-medical education, University of Mississippi, Oxford, MS. Medical education, University of Arkansas for Medical Education, 1977. Internship and residency, St. Vincent Infirmary. Practice experience, Memorial Hospital, Chattanooga, TN, 5 years; Doctor's Hospital, Little Rock, 1983 to present; Conway Regional Hospital, Conway, AR, 1985 to present. Board eligible. Member, Hamilton County Medical Society, Chattanooga.

Resident Members

Bell, Timothy J., Obstetrics/Gynecology. Born June 20, 1956, Helena, AR. Pre-medical education, University of Arkansas at Little Rock, B.S., 1979. Medical education, University of Health Sciences, Kansas City, MO, 1985. Member, MOAPS, AOA, ACOOG, ACGP.

Bowlin, Randal G., Family Practice. Born June 28, 1958, Minden, LA. Pre-medical education, University of Central Arkansas, Conway, 1981. Medical education, UAMS, 1986.

Calkins, Jr., Joe B., Medicine. Born November 29, 1960, Washington, DC. Pre-medical education, George Washington University, Washington, DC. Medical education, Medical College of Virginia, Richmond, 1987. Internship, UAMS.

Chen, Bai-Hsiun, Clinical Pathology. Born February 11, 1951, Taiwan. Pre-medical education, Kaohsiung Medical College, Kaohsiung, Taiwan. Medical education, Kaohsiung Medical College, 1976. Internship, UAMS.

Crother, Marcus A., Family Practice. Born November 8, 1958, Flint, MI. Pre-medical education, University of Michigan, Flint, B.S., 1983. Medical education, University of Michigan, Ann Arbor, 1987.

Dyer, William S., Internal Medicine. Born May 23, 1959, Jasper, Alabama. Pre-medical education, Louisiana State University, Baton Rouge, B.S., 1981. Medical education, LSU Medical Center, New Orleans, 1985. Internship, UAMS.

Einersson, Oskar, Internal Medicine. Born December 9, 1957, Reykjavik, Iceland. Pre-medical education, Reykjavik College, Iceland, 1977. Medical education, University of Iceland, Reykjavik, Iceland, 1983.

Fiser, Susan D., Neurology. Born August 18, 1951, Baltimore, MD. Pre-medical education, University of Arkansas, Fayetteville, B.A., 1974. Medical education, University of Arkansas for Medical Sciences, 1979. Internship, University of Minnesota, St. Paul.

George, Robert D., Internal Medicine. Born August 21, 1955, Cleburne, TX. Pre-medical education, Texas A & M University, College Station, B.S. (Biology), 1977 and University of Texas, Austin, B.S. (Pharmacy), 1979. Medical education, University of Texas Medical Branch, Galveston, 1987.

Grohman, Tyrrel C., Radiology. Born December 12, 1952, San Antonio, TX. Pre-medical education, East Texas Baptist University, Marshall, B.A, 1976; and Stephen F. Austin University, Nacogdoches, M.S., 1985. Medical

education, University of Texas Medical Branch, Galveston, 1987. Internship, Presbyterian Hospital of Dallas.

Heard, Jeanne K., Internal Medicine. Born April 16, 1949, Long Beach, CA. Pre-medical education, University of Arkansas, Little Rock, Ph.D., 1981. Medical education, University of Arkansas for Medical Sciences, 1985. Internship, UAMS.

Knox, Robert B., Transitional. Born April 22, 1961, Waco, TX. Pre-medical education, Texas Christian University, Fort Worth, TX, B.A., 1983. Medical education, University of Texas Medical Branch, Galveston, 1987.

Langemo, Christine E., General Surgery. Born December 27, 1959, Northfield, MN. Pre-medical education, Hamline University, St. Paul, MN, B.A., 1982. Medical education, University of Minnesota Medical School, Duluth, 1987.

Lennard, Ted A., Physical Medicine. Born October 6, 1961, Shreveport, LA. Pre-medical education, Louisiana State University, Shreveport, B.S., 1983. Medical education, Louisiana State University Medical Center, Shreveport, 1983.

May, Thomas C., Geriatric Medicine fellowship. Born March 13, 1956, Memphis, TN. Pre-medical education, Southwestern University, Memphis, TN, B.S., 1977. Medical education, University of Tennessee, Memphis, 1983. Internship, UT, Memphis. Residence, Tulane University, New Orleans.

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IN MEMORIAM

DR. FRANK E. MORGAN

Frank E. Morgan, M.D., a North Little Rock obstetrician and gynecologist, died Saturday, September 5. He was 59.

Dr. Morgan completed his undergraduate work at University of Arkansas at Fayetteville and was a 1953 graduate of the University of Arkansas for Medical Sciences. He continued to be a clinical instructor at the medical campus.

Dr. Morgan was a former officer of the Pulaski County Medical Society and well as a member of the Arkansas

Medical Society. He was also a member of the American Medical Association, the Southern Medical Association and the Little Rock Gynecological Society. Dr. Morgan was a trustee, deacon, and organist for the Central Baptist Church and an advisory board member for the Salvation Army.

Dr. Morgan is survived by his wife, Margaret Ann Barnes Morgan; a son; John Mark Morgan of North Little Rock; a brother, Jack Morgan, Jr., of North Little Rock; a sister Jean Fowler of Little Rock; and a grandchild.

RESOLUTIONS

WHEREAS, the membership of the Pulaski County Medical Society notes with sincere sorrow the recent death of a highly esteemed member, Frank E. Morgan, M.D., and

WHEREAS, he was devoted to the betterment of this organization having served as a member of the Executive Committee and as Vice President of the Society as well as representing the Society as a Councilor to the Arkansas Medical Society, and

WHEREAS, Dr. Morgan gave generously of his time and talents to his church, to his patients, and to the community in which he lived, therefore be it

RESOLVED, that this resolution be adopted and made a part of the permanent archives of the Society; and

RESOLVED, that a copy be sent to Dr. Morgan's family as an expression of our heartfelt sympathy, and

RESOLVED, that a copy be made available to *The Journal of the Arkansas Medical Society* for publication.

Adopted Unanimously	By Order of the Memorials Committee
Executive Committee	John D. Pike, M. D., Chairman
September 15, 1987	Robert Watson, M.D.
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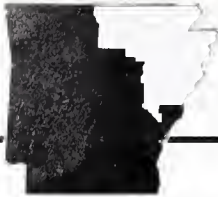
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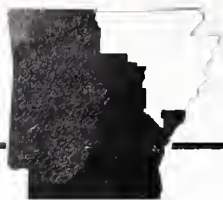
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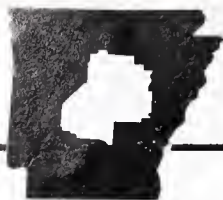
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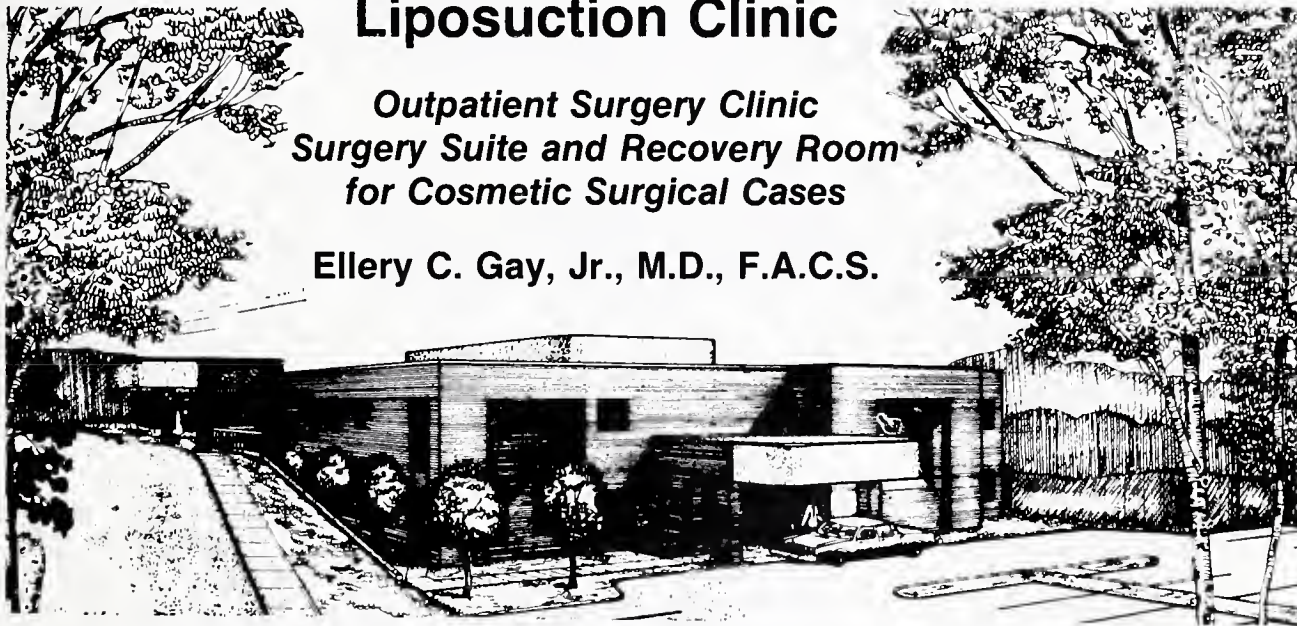
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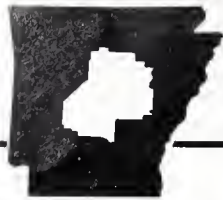
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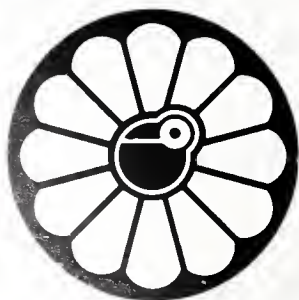
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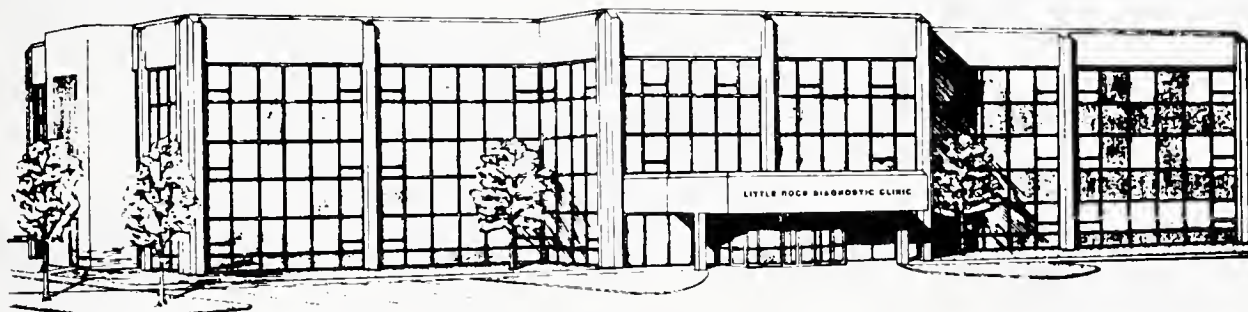
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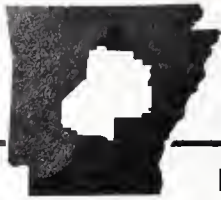
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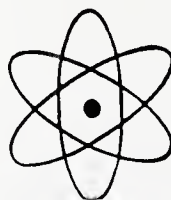
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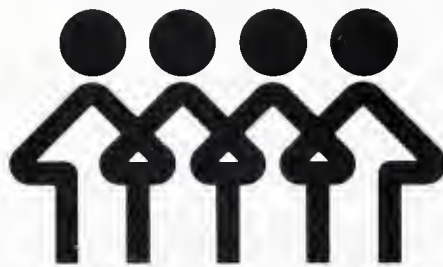
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Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving).

Usage in Pregnancy: Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage; withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline, symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).

Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady state concentrations of the tricyclic drugs. Concomitant use of Limbitrol with other psychotropic drugs has not been evaluated, sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects.

Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring

reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.

The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs:

Cardiovascular: Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke.

Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.

Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.

Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.

Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.

Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.

Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.

Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion.

Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. IV administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

Dosage: Individualize according to symptom severity and patient response. Reduce to smallest effective dosage when satisfactory response is obtained. Larger portion of daily dose may be taken at bedtime. Single h.s. dose may suffice for some patients. Lower dosages are recommended for the elderly. Limbitrol DS (double strength) Tablets, initial dosage of three or four tablets daily in divided doses, increased up to six tablets or decreased to two tablets daily as required. Limbitrol Tablets, initial dosage of three or four tablets daily in divided doses, for patients who do not tolerate higher doses.

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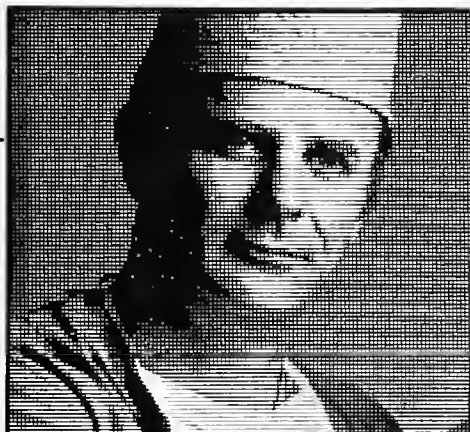
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by Jim Low

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AIDS in Arkansas

AMS Special Committee on AIDS

William N. Jones, M.D., Chairman

Update: November 1987 TESTING FOR AIDS

Larry D. Ezell, M.D.* and E. Clinton Texter, Jr., M.D.

Introduction

A recent article in Medical World News entitled "Big Fight over Testing Expected as Feds Work on AIDS Policy"¹ notes that there are sharp philosophical differences concerning federal AIDS policy. One group endorses confidential voluntary HIV testing and counselling, whereas the other urges mandatory testing of broad segments of the population and required reporting of positive results. The philosophical differences reflected on the national level are apparent at state and local levels as well.

Because of the high false positivity built in to the ELISA and Western Blot tests currently used to detect HIV ab, ethical and legal problems are being raised. In low risk blood donor populations, 98% of those having an initially positive ELISA test will turn out to be false positives.² It would cost approximately \$1,500 - \$3,000 to identify one individual in a low-risk group who is HIV positive.

Our observations, those of the American Red Cross Blood services, and those of independent observers from Massachusetts, indicate that these tests would lead to a high degree of false positivity if used as a general screening test in low-risk individuals. However, the public has expressed its concern about testing individuals in the health care fields as well as some non-medical personnel; for example, firemen involved in resuscitation efforts. The debate continues.

New information dealing with serologic tests for HIV has appeared in an article by Saah.³ This material first appeared July 24, 1987 in the American Medical News. Extended excerpts of the article follow.

"Enzyme-linked immunosorbent assays (ELISA) to detect antibody to human immunodeficiency virus (HIV) have been marketed by seven manufacturers. The ELISA is used to screen blood products, for epidemiologic studies, and for clinical purposes. Repeated reactivity requires confirmation by a second assay such as the Western blot test.

"In the latter test HIV antigens are separated electrophoretically and the ELISA-reactive serum is tested against all of these separated antigens. Clear reactivity to certain virus antigens indicates true infection with HIV. Other confirmatory tests are not as well established or as readily performed by most laboratories.

"Synthetic antigens that may prove useful as screening or confirmatory reagents are being developed, as is a system to reliably measure HIV antigen in serum or plasma."

"An enzyme-linked immunosorbent assay (ELISA) was developed to test serum or plasma for antibodies to the retrovirus⁴ and was licensed in March 1985 to screen blood donors for such antibodies.⁵ This article describes the uses of the HIV ELISA as a screening and clinical tool, reviews various assays that are used as confirmatory tests, describes the next generation of serologic tests, and discusses the prospects for an effective antigen detection test.

The ELISA Screening Test

"The ELISA is the most widely used serologic test for antibodies to HIV in serum or plasma. It is used for clinical diagnosis, to screen blood and blood products,⁶ for epidemiologic studies,⁷⁻¹¹ and to test individuals who believe that they might be infected with HIV."¹²

Quoted portions of this article were written by Alfred J. Saah, M.D. and were published in AIDS: Information on AIDS for the Practicing Physician (Volume Two).

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"Like other serologic tests, the ELISA indicates the occurrence of past infection. However, individuals with confirmed test results are presumed to be currently infected and capable of transmitting infection through blood or sexual contact. The ELISA cannot predict which asymptotically infected individuals will develop AIDS. There are indications that the antibody level decreases as disease progresses,^{7,13,14} but the variation is too great to be useful clinically."

Method

"The serum specimen is incubated with the antigens and if antibody attaches to any component in the well or on the bead, it is detected by a second antibody that detects IgG antibodies. The second antibody is labeled so that a subsequent enzymatic reaction produces a color that is proportional to the amount of human IgG present. The usefulness of assays for IgM, e.g., in neonates, is unclear. The reactivity of a serum specimen, i.e., its optical density, is usually compared to that of positive and negative control specimens tested simultaneously. Each test kit has a somewhat different method of determining the "cutoff" or "threshold" value above which a positive reaction is defined. The cutoff for each kit has been selected to optimize its sensitivity and specificity.

"The ELISA is designed to be sensitive because its primary purpose has been to prevent contaminated blood from being used for transfusion.⁶ In blood banking operations and clinical laboratories, serums are screened initially as single specimens. If the test result is positive, duplicate tests (two wells) are repeated from the same serum specimen. If one of the two tests is positive, the serum specimen is considered positive by ELISA; hence the term "repeatably reactive" is often used in place of "positive." If both repeat tests are negative, the serum specimen is reported to be negative by ELISA. Therefore, for an individual to be reported as positive by ELISA, at least two of three tests on the same serum specimen should have reacted positively. The antigens in the test well also contain antigens from the cell lines (H9 or CEM) used to grow the virus and other reagents that may cause a nonspecific reaction and make the test result appear to be positive.^{15,16} Therefore, it is necessary to confirm all positive specimens using another, more virus-specific test, usually the Western blot."

Performance Characteristics

"The ELISA detects antibody to the HIV. It does not detect viral antigens and, thus, cannot detect infection in its earliest stages, i.e., before antibody is formed. Transmission by blood transfusion has been documented at the preantibody stage.¹⁷ It appears that antibody rises to detectable levels 4 to 12 weeks after infection occurs.¹⁸ However, prolonged seronegativity has been reported.¹⁹ The duration of such antibody-negative status is unknown. Self-deferral from blood donation by members of high-risk groups con-

tinues to be an important means of preventing transfusion-associated AIDS.²⁰

"The prevalence of antibody-positive individuals determines the types of false results that are produced.²¹⁻²³ If the ELISA identifies approximately 0.25% of donated blood as repeatably reactive and the Western blot confirms HIV infection in 0.1% or 1 per 1,000, then for every 10 million individuals in the general U.S. population that are screened, approximately 25,000 (0.25%) will be repeatably reactive by ELISA, but only 10,000 (0.1%) will be confirmed by Western blot. Therefore, in the general population where antibody prevalence is very low, a repeatably reactive ELISA has poor predictive value. However, in a high-risk population, where prevalence of HIV infection is as high as 30% to 70%, a positive ELISA is almost always confirmed by Western blot, thus giving a very high positive predictive value. (Confirmation by Western blot is nonetheless necessary.)

"All of the licensed ELISA kits have high sensitivity and specificity values, yet their performance necessarily reflects the prevalence of HIV infection in a given population, thus making the kits predictably inexact. In populations with very low prevalence of HIV infection, false-positive ELISA reactions will predominate; in populations with high seroprevalence, false-negative reactions will be seen more commonly.

"Although the licensed ELISA kits have very good sensitivity in well-established infection, sensitivity during the earliest phases of antibody production may be low.²⁴ Published comparisons^{25,26} should be reviewed often by laboratories to identify the test kit(s) that best suit their needs.

Confirmatory Tests

The Western Blot

"In the Western Blot, purified virus antigens are separated by electrophoresis and the serologic test is performed on the separated virus antigens. In this way, one can determine whether the antibody that reacts in the ELISA is specific for HIV virus antigens or cross-reacts with other nonviral components of the ELISA system. The antigens in the Western blot are HIV proteins or glycoproteins of varying molecular weight. The antigens are designated as "p" for protein and "gp" for glycoprotein with a number that indicates their molecular weight in thousands of daltons (kd). Therefore, a band designated gp41 is a glycoprotein of molecular weight 41,000 daltons. The Western blot is used to confirm seroreactivity to the virus in the ELISA.

"The Western blot is usually interpreted with the naked eye. When bands are weakly reactive, the interpretation is highly subjective. Because of this subjectivity and because standardization of reagents is technically difficult, licensure has been delayed. Many of the technical issues now have been overcome and the Western blot probably will be licensed in the near future.

AIDS IN ARKANSAS

JUNE, 1987 THROUGH OCTOBER, 1987

	<u>June 9th</u>	<u>July 22nd</u>	<u>Aug. 19th</u>	<u>Sept. 30th</u>	<u>Oct. 12th</u>	<u>Oct. 21st</u>
AIDS CASES REPORTED	60	63	66	70	75	81
AIDS DEATHS REPORTED	39	39	41	41	42	42
CASES BY SEX						
Male	57	58	61	65	70	76
Female	3	5	5	5	5	5
CASES BY RACE						
White	47	49	52	56	61	67
Black	13	13	13	13	13	13
Unknown	0	1	1	1	1	1
CASES BY RISK GROUP						
Homosexual/Bisexual*	51	51	53	56	61	66
*A subgroup of IV drug users constitute a portion of the homosexual/bisexual cases. Statistics for this sub-group are:						
<i>Homosexual/Bisexual IV Drug Users</i>	15	16	16	16	16	17
IV Drug Users	4	6	7	8	8	8
Transfusion	2	2	2	2	2	2
Heterosexual	2	3	3	3	3	4**
Unknown	1	1	1	1	1	1
CASES BY AGE GROUP						
Less than 20	1	0 ⁺	0	0	0	0
20 - 29	22	22	25	25	26	29
30 - 39	23	23	26	26	30	33
40 - 49	12	12	12	12	15	15
50 - 59	1	1	2	3	3	3
60 or more	1	1	1	1	1	1
OPPORTUNISTIC DISEASE						
Pneumocystic Carinii	NA	NA	NA	35	40	42
Kaposi's Sarcoma	NA	NA	NA	4	4	4
Pneumocystis Carinii and Kaposi's Sarcoma	NA	NA	NA	30	30	32

** Out of 4 heterosexuals, 2 are females with sex partners which are/were IV drug users and 2 are males with sex partners as prostitutes (1 being an IV drug user also).

+ Because of reporting changes, this number is zero.

*The Arkansas Department of Health wants to emphasize that the figures reported are **cases diagnosed in Arkansas only**. The figures do not include patients who have been diagnosed in other states and since moved to Arkansas.*

Source: Arkansas Department of Health

"Like the ELISA, the Western blot measures IgG antibodies. Important bands include p24 (a core protein of the virus) and gp41, gp120, and gp 160 (envelope glycoproteins of the virus). Most laboratories are unwilling to interpret a blot as positive if it does not demonstrate reactivity to at least two bands that include one or more envelope antigens.

"Second Generation" Screening and Confirmatory Assays

"Second generation assays use synthetic peptides instead of native virus to test for antibody. Many synthetic core and envelope antigens are being tested to identify HIV antibody-positive serums. Such research not only identifies potential antigens that may prove useful as diagnostic reagents, but also helps to identify the regions of the various antigens that appear most immunogenic.²⁷ The latter has great importance in the search for an effective vaccine. No synthetic antigen has been tested widely enough to forecast its usefulness clinically in either a screening or confirmatory assay.

Antigen Detection Tests

Viral Antigen Capture

"Monoclonal or polyclonal antibodies are available for use in radioimmunoassays or ELISA to detect p24 antigen in supernatant fluid from HIV cultures.^{28,29} The monoclonal or polyclonal antibodies act by capturing viral p24 antigen. In this type of ELISA, a second labeled antibody is added to detect the captured antigen and produce a color enzymatically. The commercially available antigen detection assays appear to be more sensitive than reverse transcriptase assays in identifying positive cultures.

"Attempts have been made to use the p24 antigen assays in human serum or plasma for direct measurement of viral antigen. When such p24 assays are used in this way, endogenous antibody to p24 has been found to interfere with the assay to a great extent. Therefore, the usefulness of such assays in screening blood donors is unknown at this time. Another use may be in natural history studies of individuals who are at risk of seroconversion. Such studies would allow investigators to determine the evolution of very early infection and thus make the job of identifying early infection more feasible.

Uses of Serologic Tests

"Serologic Testing for HIV is generally used (1) for screening a given population group, such as potential blood donors, or (2) for diagnosis. In the latter instance, the use and meaning of the ELISA and Western blot tests should be discussed with the patient during history taking and subsequent evaluation. The results of such testing should be a part of the patient's medical record, but confidentiality is important.

"The use of these tests as a screening device, e.g., in the blood bank, requires notifying the party to be screened that

the testing will be done, and that if positive results are confirmed, counselling and medical referral will be provided. In HIV counselling and testing sites, which are provided through state health departments to allow interested persons to determine their serologic HIV status anonymously and without attempting to donate blood, counselling is provided both before and after testing regardless of the test result. Those attending an counselling and testing site either belong to a high-risk group or think that they may have been exposed. These individuals should be counselled on methods to reduce their risk of infection if they are sero-negative, while those who test positive need to know the practical implications.

"In the clinical setting, an HIV-positive result is useful in that it may lead the physician to include an AIDS-related condition in the differential diagnosis and to take an aggressive approach to the patient's illness if necessary. Individuals who are identified as positive also require careful counselling.^{5,30-32}

Conclusions

First, it is obvious that a test is not yet available which would be cost-effective and would accurately pick up antigens/antibodies more effectively than the Western blot.

Second, it is generally agreed that the position of the AMA and Representative Waxman concerning a voluntary approach to AIDS testing which includes strong confidentiality and non-discriminatory safeguards should be used at this time. Different results may be gotten if one begins mandatory testing; confidentiality within a hospital or health care setting would be extraordinarily difficult to maintain because of the number of personnel with access to records. Since we began testing, a limited number of personnel have access to the records of individuals who have tested positive. Records are also identified by a number code, not by name. Further, people who test positive are informed in a confidential fashion by the Medical Director of the Blood Services of the particular region.

Third, the position of the American Hospital Association has already been adopted in part by University Hospital of the University of Arkansas for Medical Sciences. The policy includes treating every hospitalized admission as a potential carrier of AIDS in that gloves and protective clothing are used as well as the safe disposal of syringes and body fluids as recommended by the CDC. Hospitals following these procedures would be in compliance with the recent recommendations brought forward by the Occupational Safety and Health Administration (OSHA) with its' legal implications and mandatory fines for non-compliance.

The cost of AIDS to society is rising at a tremendous rate and few states have the financial resources available to handle the AIDS epidemic now, much less ten years from now. Money spent on mandated non-discriminatory testing of special low-risk groups³³ could be better spent educating the general public about risk prevention, drug testing studies and perfecting a vaccine.

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BRIEF SUMMARY

CONTRAINDICATIONS

There are no known contraindications to the use of sucralfate.

PRECAUTIONS

Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

Drug Interactions: Animal studies have shown that the simultaneous administration of CARAFATE with tetracycline, phenytoin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. The clinical significance of these animal studies is yet to be defined.

Carcinogenesis, Mutagenesis, Impairment of Fertility: No evidence of drug-related tumorigenicity was found in chronic oral toxicity studies of 24 months' duration conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies have not been conducted.

Pregnancy: Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients, adverse effects were reported in 121 (4.7%). Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

DOSAGE AND ADMINISTRATION

The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

HOW SUPPLIED

CARAFATE (sucralfate) 1-gm pink tablets are supplied in bottles of 100 and in Unit Dose Identification Paks of 100. The tablets are embossed with MARION/1712.

Issued 3/84

References:

1. Grossman MI: *Scand J Gastroenterol* 58 (suppl 15):7-16, 1980.
2. Marks IN, in Hellemans J, Vantrappen G (eds): *Gastrointestinal Tract Disorders in the Elderly*. Edinburgh, Churchill Livingstone, 70-81, 1984.
3. Krentz K, Jablonowski H, in Hellemans J, Vantrappen G (eds): *Gastrointestinal Tract Disorders in the Elderly*. Edinburgh, Churchill Livingstone, 62-69, 1984.

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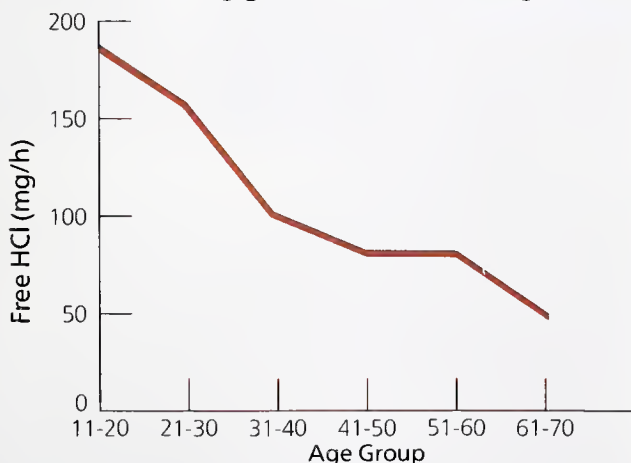
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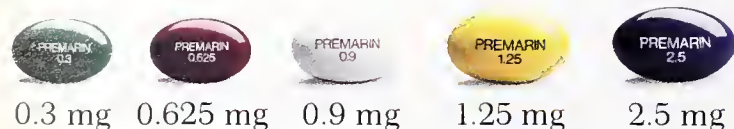
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for osteoporosis

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The appearance of these tablets is a trademark of Ayerst Laboratories.

BRIEF SUMMARY (FOR FULL PRESCRIBING INFORMATION AND PATIENT INFORMATION, SEE PACKAGE CIRCULARS.)

PREMARIN® Brand of conjugated estrogens tablets, USP

PREMARIN® Brand of conjugated estrogens Vaginal Cream, in a nonliquefying base

1. ESTROGENS HAVE BEEN REPORTED TO INCREASE THE RISK OF ENDOMETRIAL CARCINOMA

Three independent, case-controlled studies have reported an increased risk of endometrial cancer in postmenopausal women exposed to exogenous estrogens for more than one year. This risk was independent of the other known risk factors for endometrial cancer. These studies are further supported by the finding that incidence rates of endometrial cancer have increased sharply since 1969 in eight different areas of the United States with population-based cancer reporting systems, an increase which may be related to the rapidly expanding use of estrogens during the last decade. The three case-controlled studies reported that the risk of endometrial cancer in estrogen users was about 4.5 to 13.9 times greater than in nonusers. The risk appears to depend on both duration of treatment and on estrogen dose. In view of these findings, when estrogens are used for the treatment of menopausal symptoms, the lowest dose that will control symptoms should be utilized and medication should be discontinued as soon as possible. When prolonged treatment is medically indicated, the patient should be reassessed on at least a semi-annual basis to determine the need for continued therapy. Although the evidence must be considered preliminary, one study suggests that cyclic administration of low doses of estrogen may carry less risk than continuous administration; it therefore appears prudent to utilize such a regimen. Close clinical surveillance of all women taking estrogens is important. In all cases of undiagnosed persistent or recurring abnormal vaginal bleeding adequate diagnostic measures should be undertaken to rule out malignancy. There is no evidence at present that "natural" estrogens are more or less hazardous than "synthetic" estrogens at equi-estrogenic doses.

2. ESTROGENS SHOULD NOT BE USED DURING PREGNANCY

The use of female sex hormones, both estrogens and progestogens, during early pregnancy may seriously damage the offspring. It has been shown that females exposed in utero to diethylstilbestrol, a nonsteroidal estrogen, have an increased risk of developing, in later life, a form of vaginal or cervical cancer that is ordinarily extremely rare. This risk has been estimated as not greater than 4 per 1,000 exposures. Furthermore, a high percentage of such exposed women (from 30% to 90%) have been found to have vaginal adenosis, epithelial changes of the vagina and cervix. Although these changes are histologically benign, it is not known whether they are precursors of malignancy. Although similar data are not available with the use of other estrogens, it cannot be presumed they would not induce similar changes. Several reports suggest an association between intrauterine exposure to female sex hormones and congenital anomalies, including congenital heart defects and limb-reduction defects. One case-controlled study estimated a 4.7-fold increased risk of limb-reduction defects in infants exposed in utero to sex hormones (oral contraceptives, hormone withdrawal tests for pregnancy, or attempted treatment for threatened abortion). Some of these exposures were very short and involved only a few days of treatment. The data suggest that the risk of limb-reduction defects in exposed fetuses is somewhat less than 1 per 1,000. In the past, female sex hormones have been used during pregnancy in an attempt to treat threatened or habitual abortion. There is considerable evidence that estrogens are ineffective for these indications, and there is no evidence from well-controlled studies that progestogens are effective for these uses. If PREMARIN is used during pregnancy, or if the patient becomes pregnant while taking this drug, she should be apprised of the potential risks to the fetus, and the advisability of pregnancy continuation.

DESCRIPTION: PREMARIN (conjugated estrogens, USP) contains a mixture of estrogens, obtained exclusively from natural sources, blended to represent the average composition of material derived from pregnant mares' urine. It contains estrone, equilin, and 17 α -dihydroequilin, together with smaller amounts of 17 α -estradiol, equilenin, and 17 α -dihydroequilenin as salts of their sulfate esters. Tablets are available in 0.3 mg, 0.625 mg, 0.9 mg, 1.25 mg, and 2.5 mg strengths of conjugated estrogens. Cream is available as 0.625 mg conjugated estrogens per gram.

INDICATIONS AND USAGE: PREMARIN (conjugated estrogens tablets, USP) Moderate-to-severe vasomotor symptoms associated with the menopause. (There is no evidence that estrogens are effective for nervous symptoms or depression without associated vasomotor symptoms and they should not be used to treat such conditions.) Osteoporosis (abnormally low bone mass). Atrophic vaginitis. Kraurosis vulvae. Female castration.

PREMARIN (conjugated estrogens) Vaginal Cream is indicated in the treatment of atrophic vaginitis and kraurosis vulvae.

PREMARIN HAS NOT BEEN SHOWN TO BE EFFECTIVE FOR ANY PURPOSE DURING PREGNANCY AND ITS USE MAY CAUSE SEVERE HARM TO THE FETUS (SEE BOXED WARNING).

Concomitant Progestin Use: The lowest effective dose appropriate for the specific indication should be utilized. Studies of the addition of a progestin for 7 or more days of a cycle of estrogen administration have reported a lowered incidence of endometrial hyperplasia. Morphological and biochemical studies of the endometrium suggest that 10 to 13 days of progestin are needed to provide maximal maturation of the endometrium and to eliminate any hyperplastic changes. Whether this will provide protection from endometrial carcinoma has not been clearly established. There are possible additional risks which may be associated with the inclusion of progestin in estrogen replacement regimens. (See PRECAUTIONS.) The choice of progestin and dosage may be important; product labeling should be reviewed to minimize possible adverse effects.

CONTRAINDICATIONS: Estrogens should not be used in women (or men) with any of the following conditions: 1. Known or suspected cancer of the breast except in appropriately selected patients being treated for metastatic disease. 2. Known or suspected estrogen-dependent neoplasia. 3. Known or suspected pregnancy (see Boxed Warning). 4. Undiagnosed abnormal genital bleeding. 5. Active thrombophlebitis or thromboembolic disorders. 6. A past history of thrombophlebitis, thrombosis, or thromboembolic disorders associated with previous estrogen use (except when used in treatment of breast or prostatic malignancy).

WARNINGS: Estrogens have been reported to increase the risk of endometrial carcinoma (see Boxed Warning). However, a recent large, case-controlled study indicated no increase in risk of breast cancer in postmenopausal women. A recent study has reported a 2- to 3-fold increase in the risk of surgically confirmed gallbladder disease in women receiving postmenopausal estrogens.

Adverse effects of oral contraceptives may be expected at the larger doses of estrogen used to treat prostatic or breast cancer or postpartum breast engorgement, it has been shown that there is an increased risk of thrombosis in men receiving estrogens for prostatic cancer and women for postpartum breast engorgement. Users of oral contraceptives have an increased risk of diseases, such as thrombophlebitis, pulmonary embolism, stroke, and myocardial infarction. Cases of retinal thrombosis, mesenteric thrombosis, and optic neuritis have been reported in oral contraceptive users. An increased risk of postsurgery thromboembolic complications has also been reported in users of oral contraceptives. If feasible, estrogen should be discontinued at least 4 weeks before surgery of the type associated with an increased risk of thromboembolism, or during periods of prolonged immobilization. Estrogens should not be used in persons with active thrombophlebitis, thromboembolic disorders, or in persons with a history of such disorders in association with estrogen use. They should be used with caution in patients with cerebral vascular or coronary artery disease. Large doses (5 mg conjugated estrogens per day), comparable to those used to treat cancer of the prostate and breast, have been shown to increase the risk of nonfatal myocardial infarction, pulmonary embolism, and thrombophlebitis. When doses of this size are used, any of the thromboembolic and thrombotic adverse effects should be considered a clear risk.

For atrophic vaginitis

PREMARIN® (conjugated estrogens)

Vaginal
Cream

0.625 mg/g



Benign hepatic adenomas should be considered in estrogen users having abdominal pain and tenderness, abdominal mass, or hypovolemic shock. Hepatocellular carcinoma has been reported in women taking estrogen-containing oral contraceptives. Increased blood pressure may occur with use of estrogens in the menopause and blood pressure should be monitored with estrogen use. A worsening of glucose tolerance has been observed in patients on estrogen-containing oral contraceptives. For this reason, diabetic patients should be carefully observed. Estrogens may lead to severe hypercalcemia in patients with breast cancer and bone metastases.

PRECAUTIONS: Physical examination and a complete medical and family history should be taken prior to the initiation of any estrogen therapy with special reference to blood pressure, breasts, abdomen, and pelvic organs, and should include a Papanicolaou smear. As a general rule, estrogen should not be prescribed for longer than one year without another physical examination being performed. Conditions influenced by fluid retention, such as asthma, epilepsy, migraine, and cardiac or renal dysfunction, require careful observation. Certain patients may develop manifestations of excessive estrogenic stimulation, such as abnormal or excessive uterine bleeding, mastodynia, etc. Prolonged administration of unopposed estrogen therapy has been reported to increase the risk of endometrial hyperplasia in some patients. Oral contraceptives appear to be associated with an increased incidence of mental depression. Patients with a history of depression should be carefully observed. Pre-existing uterine leiomyomata may increase in size during estrogen use. The pathologist should be advised of estrogen therapy when relevant specimens are submitted. If jaundice develops in any patient receiving estrogen, the medication should be discontinued while the cause is investigated. Estrogens should be used with care in patients with impaired liver function, renal insufficiency, metabolic bone diseases associated with hypercalcemia, or in young patients in whom bone growth is not yet complete. If concomitant progestin therapy is used, potential risks may include adverse effects on carbohydrate and lipid metabolism.

The following changes may be expected with larger doses of estrogen:

- Increased sulfobromophthalain retention
- Increased prothrombin and factors VII, VIII, IX, and X, decreased antithrombin 3, increased norepinephrine-induced platelet aggregability
- Increased thyroid binding globulin (TBG) leading to increased circulating total thyroid hormone, as measured by PBI, T_4 by column, or T_4 by radioimmunoassay. Free T_3 resin uptake is decreased, reflecting the elevated TBG, free T_4 concentration is unaltered
- Impaired glucose tolerance
- Decreased pregnandiol excretion
- Reduced response to metyrapone test
- Reduced serum folate concentration
- Increased serum triglyceride and phospholipid concentration

As a general principle, the administration of any drug to nursing mothers should be done only when clearly necessary since many drugs are excreted in human milk.

Long-term, continuous administration of natural and synthetic estrogens in certain animal species increases the frequency of carcinomas of the breast, cervix, vagina, and liver. However, in a recent, large case-controlled study of postmenopausal women there was no increase in risk of breast cancer with use of conjugated estrogens.

ADVERSE REACTIONS: The following have been reported with estrogenic therapy, including oral contraceptives: breakthrough bleeding, spotting, change in menstrual flow, dysmenorrhea, premenstrual-like syndrome, amenorrhea during and after treatment, increase in size of uterine fibromyoma, vaginal candidiasis, change in cervical erosion and in degree of cervical secretion, cystitis-like syndrome, tenderness, enlargement, secretion (of breasts), nausea, vomiting, abdominal cramps, bloating, cholestatic jaundice, chloasma or melasma which may persist when drug is discontinued, erythema multiforme, erythema nodosum, hemorrhagic eruption, loss of scalp hair, hirsutism, steepening of corneal curvature; intolerance to contact lenses, headache, migraine, dizziness, mental depression, chorea, increase or decrease in weight, reduced carbohydrate tolerance, aggravation of porphyria, edema, changes in libido.

ACUTE OVERDOSAGE: May cause nausea, and withdrawal bleeding may occur in females.

DOSSAGE AND ADMINISTRATION:

PREMARIN® Brand of conjugated estrogens tablets, USP

1. *Given cyclically for short-term use only.* For treatment of moderate-to-severe vasomotor symptoms, atrophic vaginitis, or kraurosis vulvae associated with the menopause (0.3 mg to 1.25 mg or more daily). The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible. Administration should be cyclic (eg, three weeks on and one week off). Attempts to discontinue or taper medication should be made at three- to six-month intervals.

2. *Given cyclically.* Osteoporosis. Female castration. Osteoporosis—0.625 mg daily. Administration should be cyclic (eg, three weeks on and one week off). Female castration—1.25 mg daily, cyclically. Adjust upward or downward according to response of the patient. For maintenance, adjust dosage to lowest level that will provide effective control.

Patients with an intact uterus should be monitored for signs of endometrial cancer and appropriate measures taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

PREMARIN® Brand of conjugated estrogens Vaginal Cream

Given cyclically for short-term use only. For treatment of atrophic vaginitis or kraurosis vulvae.

The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible.

Administration should be cyclic (eg, three weeks on and one week off).

Attempts to discontinue or taper medication should be made at three- to six-month intervals.

Usual dosage range: 2 g to 4 g daily, intravaginally, depending on the severity of the condition.

Treated patients with an intact uterus should be monitored closely for signs of endometrial cancer and appropriate diagnostic measures should be taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

References:

- Lindsay R, Hart OM, Clark OM. The minimum effective dose of estrogen for prevention of postmenopausal bone loss. *Obstet Gynecol* 1984;63:759-763.
- Studd JWW, Thom MH, Paterson MEL, et al. The prevention and treatment of endometrial pathology in postmenopausal women receiving exogenous estrogens. In Pasetto N, Paoletti R, Ambrus JL (eds). *The Menopause and Postmenopause*. Lancaster, England, MTP Press Ltd, 1980, chap 13.

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Medical Crossfire: Prepayment of Participatory Insurance for Dissatisfaction Claims

Aesculark

Medico-legal actions are making an unreasonable demand on physicians' time, energy, and pocketbooks. It is a phase of the product liability problem that is taking America by storm - and although reasonable recourse against an unfair action or faulty product is necessary, a litigious society can maim itself - like shooting oneself in the foot; not a fatal injury but one that impedes normal pursuits. Just as in any product liability situation, the more the awards and the greater frequency of the use of courts, the higher the cost to the consumer - eventually it is a self-defeating proposition. Quite aside from the direct monetary aspects, insurance premiums for product liability go higher and higher and competent business people, professionals and products are driven from the marketplace.

Given this setting, physicians are actively seeking some relief from malpractice suits, which are an off-shoot of the product liability problem. What are the alternatives? Socialized medicine - part of the privatization vs. government control seen in Great Britain. A medical strike - unthinkable. Or, physicians could become the paid employees of hospitals, private medical organizations, or insurance companies - a very likely possibility not unlike the disappearance of the "mom and pop store" and the American dream of rising to the top on one's own efforts.

Perhaps, a more viable answer to the malpractice situation might be called participatory insurance used in association with legally empowered dissatisfaction boards. The thrust of this plan is that every patient who comes to see a physician would be required to co-pay with the physician a set amount of insurance against a future possible dissatisfaction with the result of medical care and are not in any sense true malpractice. The premium the patient pays and the

premium the physician pays would be a percentage of the expected bill. The patient could pay cash or have some type of credit card charge account. If more suits or higher awards continue, the patient will immediately become aware though higher premiums and a smaller insurance to pay him or her. If the patient co-pays for insurance, it will focus the public's attention on this issue. The traveling public is accustomed to buying catastrophe insurance at the airport - good for a very limited flight or limited period of time. A special insurance desk or even a machine vendor could sell catastrophe insurance in the lobby or admission office of hospitals. This type of policy could vary the premium depending on the extent of coverage the patient desires.

If the patient feels that he has been treated badly, there should be some type of quasi or completely legal board empowered to hear the patient's dissatisfaction and to decide if it merits some type of reasonable payment from the insurance pool. The decision of this dissatisfaction should be final with almost no exceptions. The dissatisfaction board should include a member of the public, someone skilled in insurance accounting and statistics, a physician, and a member of the insurance commission. The big problem aside from fairness would be to make such a program economically feasible and self-perpetuating both fiscally and as a place of justice.

The public's participation in dissatisfaction pre-insurance tends to restrict abuse of this type of insurance coverage as unreasonable usage or demands will run up the premium which the public (and the physician) has to pay. The public would need to be educated how this type of insurance works and the benefits to be derived from an impartial board sitting in judgment on dissatisfaction problems - many of which are not malpractice.

"LEGALLY SPEAKING"

RE: Schaefer v. AMS, et al.



Michael W. Mitchell, J.D.*

After three years, over \$50,000 for attorneys, experts, court reporters and other expenses, and worry about paying more than \$190,000 in damages and attorney fees, the AMS has won the first round of a lawsuit filed by its former Executive Vice President, Paul C. Schaefer (Plaintiff).

Here's what happened. In 1956 the AMS adopted a retirement program for its employees. The Plaintiff investigated alternative plans and finally recommended a plan to provide a percentage of salary on retirement. The plan was amended from time to time with the help of an insurance man from Fort Smith. Then, about a year before Plaintiff's retirement date, he recommended Amendment 3 which contained provisions that were "illegal"¹ and would eventually lead to "tremendous costs."² No one knew that the Plaintiff had failed to perform the customary investigation and was "counseling" with his own attorney "on his behalf."³ Several months later after Plaintiff had been warned by experts that the new provisions would be "tremendously expensive and inflationary" and cautioned as to "whether the Medical Society could afford such costs", he admittedly did not inform the Council.⁴ The plan amendments were adopted and the Plaintiff retired one month later and began drawing benefits (currently over \$3,200 per month).

Over the next few years "skyrocketing expenses" and "general confusion" about certain plan provisions became a growing concern.⁵ "Dr. William N. Jones, a member of the AMS Council, was the primary motivation behind the increasing skepticism about Schaefer's conduct toward the pension plan."⁶ In spite of the "tremendous costs" (costs to date for Plaintiff's total retirement benefits amount to \$389,000), Plaintiff continued to inform "the doctors that all was well"⁷ and that such provisions were "prevalent" even though he "knew that a COLA was rare for a small organi-

zation like [the] AMS."⁸ His "zealous efforts to protect his retirement benefits"⁹ included "persuasive letter writing"¹⁰ to councilors and officers and an unsuccessful attempt to "replace the primary opponent of the plan" [Dr. Jones].¹¹ Instead of removing Dr. Jones from the Council, the Council removed the Plaintiff from the Board of Trustees and appointed a committee to investigate and make recommendations concerning the plan. On September 7, 1980, the committee reported back to the Council, which also granted a request to the Plaintiff to rebut the committee's findings. However, at the conclusion of the presentations, the Council voted to terminate the plan resulting in Plaintiff's future benefits remaining the same rather than increasing with the Consumer Price Index.

On September 21, 1984, Schaefer filed suit against the AMS and the plan trustees for the increases provided for in the terminated plan. The AMS denied that Plaintiff's right to increases was accrued benefits and counterclaimed for the expenses caused by the Plaintiff's wrongful acts (\$140,000 plus interest and attorney's fees). The Court found that Plaintiff's claim for increases under the Consumer Price Index provision constituted "accrued benefits."¹² However, the Court further found that Plaintiff was not entitled to recover the increased benefits because he "misused his position of trust to increase his retirement benefits."¹³ The Court concluded as follows, to-wit:

...the Plaintiff was guilty...of substantial self-dealing and conflicts of interest...and...he used his position as a trusted employee of [the] AMS and a trustee of the Plan to cause the enactment of such provisions without providing the council or the other trustees with information at his disposal which showed that such provisions would be costly, to say the least, and would ultimately result in the destruction of the Plan.¹⁴

Nevertheless, the Court concluded that the AMS could not recover either. Even though the statute of limitations is

* General Counsel to the Arkansas Medical Society, Mitchell and Roachell Law Firm, Little Rock, Arkansas.

six years for "fraud or concealment",¹⁵ the Court concluded that Plaintiff's misconduct "did not rise to the level of fraud or concealment" required by the six year statute.¹⁶

It is over the "fraud or concealment" issue that the Council voted to appeal. The Council is convinced that Plaintiff's misconduct constitutes "fraud or concealment" under the six year statute. At a cost of approximately \$15,000 the case will be reviewed by the United States Court of Appeals in St. Louis. Although there is always some risk in appealing, it should be minimal due to the Court's strong findings against the Plaintiff. The Council is outraged at the Plaintiff's misconduct and feels that it is unjust to allow him to continue to draw inflated benefits which represent the reward of his "self-dealing." But for the statute of limitations problem, evidence was admitted showing the right to recover a judgement of over \$200,000, including damages, interest and attorney's fees. More to come later.

References

1. Schaefer v. Arkansas Medical Society, et al. No. 84-2299, slip. op at 20 (U.S.D.C. Ark. Sept. 25 1987).
2. Id. p. 17.
3. Id. p. 7.
4. Id. p. 13.
5. Id. p. 16.
6. Id.
7. Id. p. 17.
8. Id. p. 18.
9. Id. p. 19.
10. Id.
11. Id.
12. Id. p. 33; Shaw v. Internation Association of Machinists and Aerospace Workers Pension Plan, 563 F. Supp. 653 (C.D. Cal. 1983), aff'd, 750 2d 1458 (9th Cir.) cert. den'd, 471 U.S. 1137 (1987).
13. Id. p. 34.
14. Id. p. 21.
15. 29 U. S. C. Section 1113.
16. Schaefer v. AMS, supra, P. 29.

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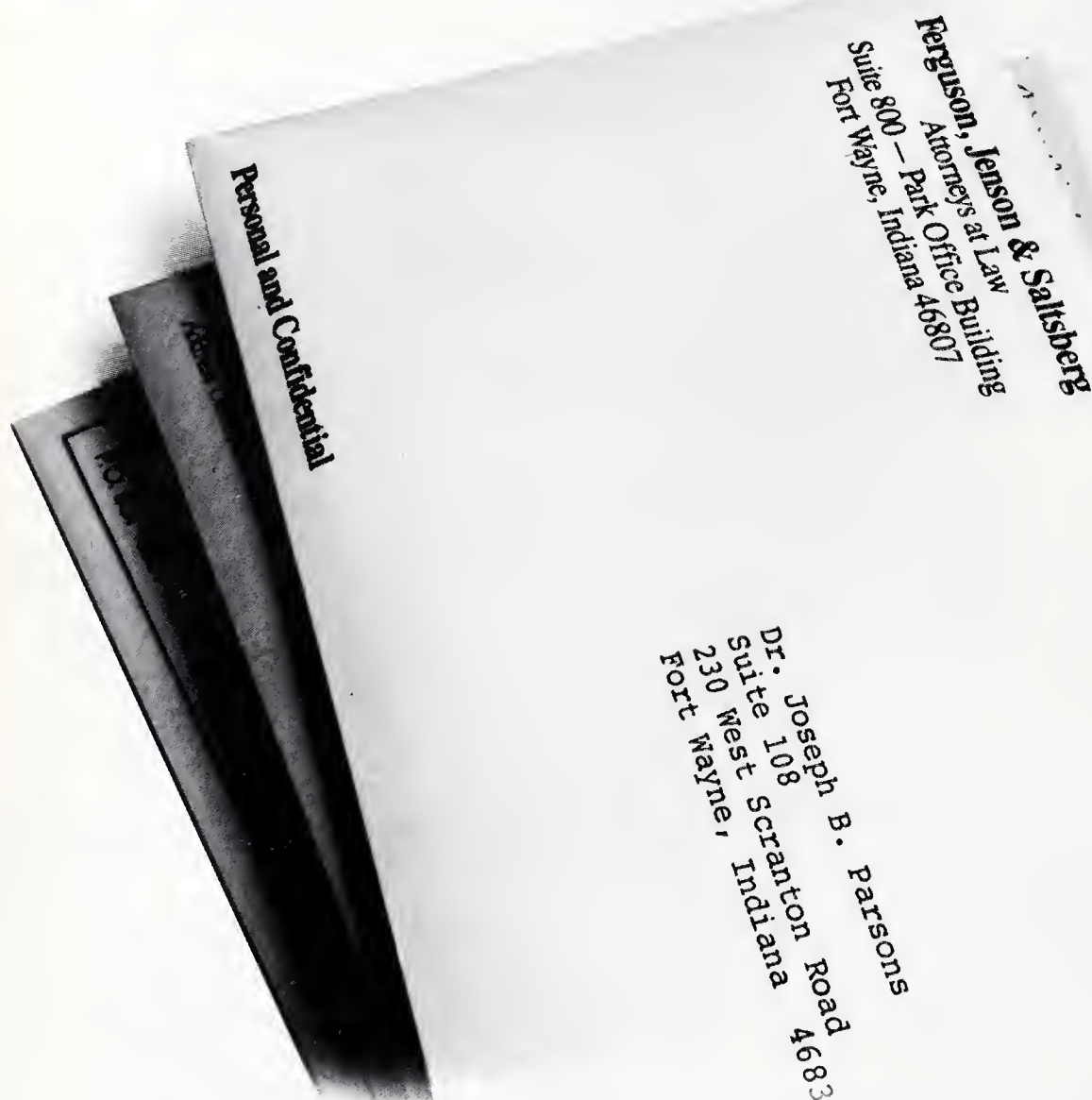
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Superficial Fungal Infections in Children

*Neloufa Merrill, M.D. and Susan Bayliss Mallory, M.D.**

Fungal organisms cause a variety of skin diseases in humans. At one extreme, fungal disease may be systemic and fatal, while at the other end, it may be simply a nuisance. Fungal infections manifested solely on the skin and mucous membranes are superficial and bear little resemblance to systemic mycoses.

Superficial fungal infections are common during childhood and adolescence. In spite of this, fungal lesions are frequently mistaken for other diseases because of their pleomorphic appearance. Lesions may appear macular, scaly, pustular, vesiculobullous, or even nodular.¹ By the time a patient seeks the help of a physician, the lesions have frequently been altered morphologically by topical medications.

Superficial fungal infections are generally classified into three main categories:

1. Tinea versicolor is caused by a dimorphic yeast called Mallassezia furfur. This infection most commonly affects adolescents and young adults and is seldom symptomatic.
2. Dermatophytes cause diseases of the skin, hair and nails. These fungi produce keratinases which aid invasion of the epidermis which causes scaling and inflammation.
3. Candida albicans infections such as diaper dermatitis or thrush are common in infancy.

Diagnosis

In order to make an accurate diagnosis, three simple inexpensive and readily available diagnostic procedures may be performed in most office situations.

A Wood's lamp emits long wave ultraviolet light at 365 nm and should be used in a totally dark room. The examiner should allow time for his eyes to adjust to the darkness. Microsporum species fluoresce with a green color along the sides of affected hairs. Trichophyton tonsurans, however, which is presently the most common organism causing tinea capitis, does not fluoresce. Thick scales, medication and debris may confuse the picture, causing a glow under a

Wood's lamp examination and giving a false positive reaction.

The 10% potassium hydroxide (KOH) mount is easy to perform, very economical and highly reliable. Appropriate specimens should be collected by scraping adherent scales from the active border with a dull-edged scalpel or glass slide. With bullous or vesicular lesions, the blister roof should be removed with an iris scissors and examined for hyphae. In tinea capitis, broken hairs are easily and painlessly removed with a forceps or tweezers. For tinea unguium, nails should be scraped both on the surface of the nail plate and from the subungal debris. Material is then placed on a clean glass slide and covered with 1-2 drops of 10% KOH and a coverslip. Gentle pressure is applied to the coverslip with a pencil eraser in order to flatten the scales. The slide is gently heated over a flame until it just begins to bubble. It is important to avoid boiling, as this causes crystallization of the KOH and interferes with examination of hyphae. If heat is not applied, the preparation should be allowed to sit for 10-20 minutes. Alternatively, the use of KOH in dimethylsulfoxide (DMSO) will dissolve the thick scales. Heating such a preparation should not be performed and actually may cause dissolution of the hyphae giving a false negative test. KOH preparations are diagnostic for dermatophytoses, tinea versicolor, and candidal infections.

A few important points should be kept in mind while preparing a KOH mount. First, scrape enough material for a thorough examination. Large amounts of scale will increase the chances of demonstrating the organisms. Second, allow sufficient time to elapse for keratin digestion. This may be a few minutes extra if the specimen is thick. Third, artifacts such as fibers from fabrics and cell walls can easily mislead the novice. Routinely looking at specimens gives the practitioner a better idea of discerning non-fungal elements. With practice, the doubly refractile linear and branching hyphae can be recognized. The skill of finding organisms takes time, but is a great asset to a physician's diagnostic tools.

Specimens for fungal cultures should be collected in the same manner as for the KOH preparations. If possible, cultures should be inoculated in the examining room to

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void loss of material in transport. Tissue fragments should be embedded slightly into the medium to avoid contamination with airborne non-pathogens. Fungal cultures are used mainly for tinea capitis. The three most commonly used mediums for fungal cultures are: Sabouraud's agar, mycosel agar, and Dermatophyte Test Medium (DTM). Sabouraud's agar is a glucose agar without antibiotics used for fungal growth and has excellent reliability. Fungal growth requires 2-4 weeks. Mycosel agar is Sabouraud's agar with an antibiotic to prevent bacterial overgrowth. It is an excellent growth medium for dermatophytes as well as Candida albicans. Candida should grow within 2-4 days, but most dermatophytes need 2-4 weeks.

Dermatophyte Test Medium (DTM) is a commercially available medium with phenol red incorporated as a selective color indicator. Dermatophytes produce alkaline metabolites which change the color of the medium from yellow to red. The color change is usually apparent by the end of the first week but may take up to two weeks. Incubation over two weeks does not result in increased recovery of dermatophytes, and actually increases the chances of producing false positives.

Tinea Versicolor

Tinea versicolor is a common cutaneous problem and is caused by the dimorphic yeast, Malassezia furfur (previously called Pityrosporum orbiculare). It is a normal skin saprophyte and can be found on one or more surface sites in more than 90% of individuals over age 15 years. Malassezia furfur organisms remain relatively sparse until puberty, then proliferate in areas of increased sebaceous gland activity, such as the scalp, chest and back.

Because tinea versicolor is usually asymptomatic, affected persons do not usually seek medical attention until patches of skin do not tan normally. Malassezia lives in the hair follicles. Perifollicular macules begin and slowly enlarge, merging to form plaques with sharply demarcated scaly borders. Some lesions may even be papular. A hallmark of tinea versicolor is the absence of inflammation. The color of the lesions may vary from deep brown to almost white, hence the name versicolor.

Factors which predispose to the growth of Malassezia organisms include a warm human environment, excess sweating, chronic illness, immunosuppressive therapy, and a genetic predisposition. Wood's light examination reveals a golden yellow fluorescence at the sites of scale. KOH preparation demonstrates the typical microscopic appearance of small spores in grape-like clusters with short branched mycelia, commonly referred to as "spaghetti and meatballs."

Disorders such as pityriasis alba, post-inflammatory hypopigmentation, vitigilo, melasma, seborrheic dermatitis, pityriasis rosea and secondary syphilis should be differentiated from tinea versicolor by KOH preparation.

Treatment of tinea versicolor should begin with topical

preparations such as selenium sulfide, or antifungal agents. Selenium sulfide 2 1/2% shampoo is applied to the affected skin for 10 minutes, then showered off by gently rubbing the affected area with an abrasive pad. If lesions are extensive, the patient should apply the shampoo from the neck to the knees, avoiding the genitalia. Shampooing the scalp may help reduce heavy growth of organisms in the scalp which may spread on to the skin. This procedure should be repeated for 7-10 consecutive nights, and then once a week for prophylaxis. If lesions recur, the same regimen should be repeated. Selenium sulfide shampoo can cause irritation and dryness of the skin and overuse should be avoided. Topical antifungal agents such as Tinver solution or the imidazoles (i.e., miconazole or clotrimazole) also are effective. These agents may be expensive if large areas of the body need to be covered, and should be applied twice a day for 2-4 weeks. Ketoconazole 200-400 mg daily for 1-4 weeks may be used if other treatments fail. However, because of hepatotoxicity, ketoconazole should be reserved only for resistant cases.

If present, scaling and pruritus respond promptly to therapy, but pigmentary changes resolve more gradually and may require sun exposure for repigmentation.

Dermatophytoses

Dermatophytes are a group of filamentous fungi that invade keratinized tissue, and have been described since the earliest of historical times. Although 39 species of dermatophytes exist, the most common organisms are Trichophyton, Microsporum and Epidermophyton. Classically, dermatophytoses have been named according to the regional site of infections, for example, tinea capitis (head) or tinea corporis (body).

Tinea capitis is a fungal infection of the scalp and hair with the peak age of 4-5 years. There is no sex predilection, and black children are more commonly affected than white.

Trichophyton tonsurans is the causative organism in increasing numbers in the United States.² Presentation may be varied. For example, black dot ringworm consists of multiple bald patches where the infected hairs have broken off sharply at the follicular orifices leaving a spore filled hair stub which appears as a black dot. Large areas of the scalp may be affected. Multiple sterile pustules which represent a hypersensitivity reaction to the fungus are called kerions. Enlarged lymph nodes in the occipital and posterior cervical chains often develop. Tinea capitis can be highly contagious and is usually spread by sharing combs and brushes. Wood's light does not demonstrate organisms that fluoresce.

Microsporum audouinii causes up to 9% of tinea capitis in the United States. The classic "gray patch tinea" was ubiquitous 20 years ago, but is being quickly replaced by T. tonsurans. Clinically, a small red papule begins at a follicular opening and gradually enlarges to form a circular scaly patch. Infected hairs become discolored, lustreless, and brittle. Multiple areas of alopecia may develop which

coalesce without any evidence of inflammation. Pruritus may be severe. Hairs characteristically fluoresce a greenish color along the hair shafts close to the scalp under Wood's light.

Microsporum canis is a misnomer because the main reservoir is actually the cat instead of the dog. The organism incites a marked inflammatory response in man. Kerion formation is common, demonstrating a swollen, boggy, purulent, tender area devoid of hair. Although kerions may clear spontaneously in weeks to months, permanent hair loss may result if not treated.

Differential diagnosis of tinea capitis includes alopecia areata, trichotillomania, seborrheic dermatitis and bacterial pyodermas. Both Gram stains and KOH preparations aid in diagnosis.

Treatment of tinea capitis before 1958 consisted of physical plucking, X-ray epilation and systemic thallium. Griseofulvin is now the drug of choice for tinea capitis. The microsize form is given in a dose of 10-20 mg/kg/day in two divided doses with food until 2-4 weeks after a negative fungal culture. A usual course of treatment is between 6-12 weeks. If ultramicrosize griseofulvin is used, half the dose can be prescribed. Absorption of the drug is better when taken with fatty foods such as ice cream, whole milk, or butter. Common side effects include nausea, vomiting, and headache. Hepatotoxicity is rare. Griseofulvin is fungistatic but not sporicidal. An important adjunct to treatment is shampooing with selenium sulfide 2 1/2% shampoo twice a day for 1-2 weeks to reduce the shedding of spores.³ This renders the patient noninfectious more quickly than without selenium sulfide. The use of ketoconazole is controversial and should only be considered in cases which have not responded to adequate doses of griseofulvin.

For treatment of kerions, prednisone tapered over two weeks may help by decreasing inflammation and thus avoiding scarring. Other family members, especially siblings, should be checked for tinea capitis. Children may have a subacute form of tinea capitis and should be cultured and treated if necessary.⁴

Tinea corporis is classically presented as a papule which spreads peripherally forming an annular lesion, clearing centrally as it expands. Mild erythema, scaling and pruritus are common. The sharply demarcated elevated border is composed of papules or tiny vesicles. At times, gyrate or figurate plaques may spread over large areas. Trichophyton rubrum, Trichophyton mentagrophytes, and Microsporum canis are the most common organisms.

Clinical variants may not demonstrate central clearing. Instead, lesions may be grouped pustules, verrucous nodules, or perifollicular granulomas which are usually seen on the legs of women, called "Majocchi's granulomas". Tinea profunda is an uncommon disease causing inflammatory nodules and abscesses in patients with underlying immune defects. "Tinea incognito" is a term referring to lesions altered by therapy such as topical or systemic corticosteroids.

Differential diagnosis of tinea corporis includes papulosquamous diseases such as pityriasis rosea, psoriasis, and annular seborrheic dermatitis.

Topical antifungal agents used twice daily are highly effective treatment except in deeper lesions where griseofulvin may be necessary. Miconazole, now available over the counter, is usually the least expensive among the new imidazoles.

Tinea cruris is primarily a disease of post-pubertal males, symmetrically involving the inner thighs, classically sparing the scrotum. If the scrotum appears involved, there may be a superimposed candidal infection. Typically, lesions are erythematous plaques with scaly advancing borders. Treatment includes topical antifungal agents and drying.

Tinea Pedis (feet) and tinea manuum (hands) are rare before puberty. The majority of foot dermatoses in prepubertal children are either atopic dermatitis or contact dermatitis. Clinically, there are three specific patterns of tinea pedis: intertriginous webspace maceration, moccasin type hyperkeratosis, and vesiculation of the arch of the foot. Dermatitis which is concentrated on the dorsum of the foot is usually not tinea but contact dermatitis. Tinea manuum is even less common in childhood and when present is usually associated with tinea pedis.

Applying topical antifungals twice daily is usually effective treatment. Soaking the hands or feet in acetic acid soaks may be useful if there is oozing and inflammation.

Onychomycosis

Onychomycosis is a fungal infection of the nails, usually caused by T. rubrum and T. mentagrophytes. It is very uncommon before puberty.⁵ The most common presentation is subungual debris with discoloration of the distal nail, often beginning on the toenails. Nails become thickened and discolored with time. Diagnosis is often difficult because of the paucity of fungi seen on KOH preparation.

Candidiasis

Yeast-like fungi of the genus *Candida* are ubiquitous in the environment. Candida albicans is not part of the normal skin flora, but transient skin contamination from the alimentary tract and vagina may occur. When organisms grow to sufficient numbers, they produce inflammation.

Cutaneous infections with *Candida* may be acute or chronic. Mucocutaneous involvement may take the form of thrush in the mouth, diaper dermatitis, paronychia, congenital cutaneous candidiasis, or chronic mucocutaneous candidiasis.

Oral candidiasis affects approximately 5% of infants. While altered host factors such as antibiotic therapy or immunologic deficiencies are often required for the development of oral candidiasis in adults, the newborn infant may develop thrush when exposed to only a few organisms, frequently picked up from the mother's vagina at birth. Lesions present as white raised patches on the buccal

mucosa, tongue and palate. Scraping the mucosal patches reveals an inflamed, friable bleeding mucosa.

Treatment with mycostatin oral suspension 1-2 ml four times a day for 10 days is effective. Gentle rubbing the buccal mucosa with a Q-tip covered with medicine helps eliminate organisms. Resistant cases may be treated with 1% Gentian violet aqueous solution painted daily until clear.

Diaper candidiasis presents with brightly erythematous confluent patches, which have a sharply demarcated serpinginous border and are studded with vesiculopustules and satellite lesions. Applying mycostatin cream with each diaper change and keeping the area dry should clear the infection. Alternately, clotrimazole or miconazole cream may be used. If there is marked inflammation, hydrocortisone 1% cream may be used for a few days. Stronger corticosteroids such as triamcinolone, often found in mixed creams (i.e., Mycolog), are not indicated in the diaper area. For simple diaper dermatitis without thrush, the addition or oral mycostatin to eradicate Candida in the alimentary tract has not been shown to be helpful.

Candidal paronychia may be seen in children who suck their fingers, in individuals who are frequently exposed to moisture, and in diabetics. Miconazole or clotrimazole cream four times a day while keeping the hands dry is the treatment of choice.

Congenital cutaneous candidiasis is an uncommon form of candidiasis seen in health fullterm newborns.⁶ It is thought to be acquired in-utero by the ascent of organisms through the genital tract. Lesions are noted hours or days after birth and consist of diffuse erythematous macules and

papules which develop into pustules and heal with desquamation in several days. Diagnosis is made by demonstrating organisms by KOH preparation and culture. Most infants are immunologically normal. Treatment with topical anti-candidal agents clears the eruption.

Conclusion

In conclusion, a few points should be stressed. First, fungal infections of the skin are common and may mimic other dermatoses. Diagnostic techniques are simple and inexpensive. Wood's light examination or scalp hairs for tinea capitis may be negative as in most cases of tinea capitis seen today. Potassium hydroxide preparations and/or fungal cultures should be performed on scaly lesions to confirm the diagnosis of tinea. Atypical presentations and non-responsiveness to conventional treatment may need referral to a dermatologist. Finally, the key to successful therapy is an accurate diagnosis.

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Brief Summary. Consult the package literature for prescribing information. Indications and Usage: Keflet® Tablets (cephalexin, Dista) are indicated for the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

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Otitis media due to *S. pneumoniae*, *Haemophilus influenzae*, staphylococci, streptococci, and *Neisseria catarrhalis*

Skin and skin structure infections caused by staphylococci and/or streptococci

Bone infections caused by staphylococci and/or *Proteus mirabilis*

Genitourinary tract infections, including acute prostatitis, caused by *Escherichia coli*, *P. mirabilis*, and *Klebsiella sp.*

Note—Culture and susceptibility tests should be initiated prior to and during therapy. Renal function studies should be performed when indicated.

Contraindication: Keflet is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: BEFORE CEPHALEXIN THERAPY IS INSTITUTED, CAREFUL INQUIRY SHOULD BE MADE CONCERNING PREVIOUS HYPERSENSITIVITY REACTIONS TO CEPHALOSPORINS AND PENICILLIN. CEPHALOSPORIN C DERIVATIVES SHOULD BE GIVEN CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS.

SERIOUS ACUTE HYPERSENSITIVITY REACTIONS MAY REQUIRE EPINEPHRINE AND OTHER EMERGENCY MEASURES.

There is some clinical and laboratory evidence of partial cross-allergenicity of the penicillins and the cephalosporins. Patients have been reported to have had severe reactions (including anaphylaxis) to both drugs.

Any patient who has demonstrated some form of allergy, particularly to drugs, should receive antibiotics cautiously. No exception should be made with regard to Keflet.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins); therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening.

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis.

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C. difficile*. Other causes of colitis should be ruled out.

Usage in Pregnancy—Safety of this product for use during pregnancy has not been established.

Precautions: General—Patients should be followed carefully so that any side effects or unusual manifestations of drug idiosyncrasy may be detected. If an allergic reaction to Keflet occurs, the drug should be discontinued and the patient treated with the usual agents (eg, epinephrine or other pressor amines, antihistamines, or corticosteroids).

Prolonged use of Keflet may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug.

Keflet should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

Indicated surgical procedures should be performed in conjunction with antibiotic therapy.

As a result of administration of Keflet, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

Usage in Pregnancy—Pregnancy Category B—The daily oral administration of cephalexin to rats in doses of 250 or 500 mg/kg prior to and during pregnancy, or to rats and mice during the period of organogenesis only, had no adverse effect on fertility, fetal viability, fetal weight, or litter size. Note that the safety of cephalexin during pregnancy in humans has not been established.

Cephalexin showed no enhanced toxicity in weanling and newborn rats as compared with adult animals. Nevertheless, because the studies in humans cannot rule out the possibility of harm, Keflet should be used during pregnancy only if clearly needed.

Nursing Mothers—The excretion of cephalexin in the milk increased up to 4 hours after a 500-mg dose; the drug reached a maximum level of 4 μ g/mL, then decreased gradually, and had disappeared 8 hours after administration. Caution should be exercised when Keflet is administered to a nursing woman.

Adverse Reactions: Gastrointestinal—Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely. The most frequent side effect has been diarrhea. It was very rarely severe enough to warrant cessation of therapy. Dyspepsia and abdominal pain have also occurred. As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.

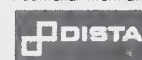
Hypersensitivity—Allergic reactions in the form of rash, urticaria, angioedema, and, rarely, erythema multiforme, Stevens-Johnson Syndrome, or toxic epidermal necrolysis have been observed. These reactions usually subsided upon discontinuation of the drug. Anaphylaxis has also been reported.

Other reactions have included genital and anal pruritus, genital moniliasis, vaginitis and vaginal discharge, dizziness, fatigue, and headache. Reversible interstitial nephritis has been reported rarely. Eosinophilia, neutropenia, thrombocytopenia, and slight elevations in SGOT and SGPT have been reported.


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Daily therapy with ZOVIRAX CAPSULES is generally well tolerated. The most frequent adverse reactions reported during clinical trials were headache, diarrhea, nausea/vomiting, vertigo, and arthralgia.

The physical and emotional difficulties posed by genital herpes are unique for each patient. The frequency and severity of recurrent episodes, as well as the emotional impact of the disease, should be considered when selecting daily therapy with ZOVIRAX CAPSULES.

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Brief Summary

INDICATIONS AND USAGE: Zovirax Capsules are indicated for the treatment of initial episodes and the management of recurrent episodes of genital herpes in certain patients.

The severity of disease is variable depending upon the immune status of the patient, the frequency and duration of episodes, and the degree of cutaneous or systemic involvement. These factors should determine patient management, which may include symptomatic support and counseling only, or the institution of specific therapy. The physical, emotional and psycho-social difficulties posed by herpes infections as well as the degree of debilitation, particularly in immunocompromised patients, are unique for each patient, and the physician should determine therapeutic alternatives based on his or her understanding of the individual patient's needs. Thus Zovirax Capsules are not appropriate in treating all genital herpes infections. The following guidelines may be useful in weighing the benefit/risk considerations in specific disease categories:

First Episodes (primary and nonprimary infections — commonly known as initial genital herpes):

Double-blind, placebo-controlled studies have demonstrated that orally administered Zovirax significantly reduced the duration of acute infection (detection of virus in lesions by tissue culture) and lesion healing. The duration of pain and new lesion formation was decreased in some patient groups. The promptness of initiation of therapy and/or the patient's prior exposure to Herpes simplex virus may influence the degree of benefit from therapy. Patients with mild disease may derive less benefit than those with more severe episodes. In patients with extremely severe episodes, in which prostration, central nervous system involvement, urinary retention or inability to take oral medication require hospitalization and more aggressive management, therapy may be best initiated with intravenous Zovirax.

Recurrent Episodes:

Double-blind, placebo-controlled studies in patients with frequent recurrences (6 or more episodes per year) have shown that Zovirax Capsules given for 4 to 6 months prevented or reduced the frequency and/or severity of recurrences in greater than 95% of patients. Clinical recurrences were prevented in 40 to 75% of patients. Some patients experienced increased severity of the first episode following cessation of therapy; the severity of subsequent episodes and the effect on the natural history of the disease are still under study.

The safety and efficacy of orally administered acyclovir in the suppression of frequent episodes of genital herpes have been established only for up to 6 months. Chronic suppressive therapy is most appropriate when, in the judgement of the physician, the benefits of such a regimen outweigh known or potential adverse effects. In general, Zovirax Capsules should not be used for the suppression of recurrent disease in mildly affected patients. Unanswered questions concerning the human relevance of *in vitro* mutagenicity studies and reproductive toxicity studies in animals given very high doses of acyclovir for short periods (see Carcinogenesis, Mutagenesis, Impairment of Fertility) should be borne in mind when designing long-term management for individual patients. Discussion of these issues with patients will provide them the opportunity to weigh the potential for toxicity against the severity of their disease. Thus, this regimen should be considered only for appropriate patients and only for six months until the results of ongoing studies allow a more precise evaluation of the benefit/risk assessment of prolonged therapy.

Limited studies have shown that there are certain patients for whom intermittent short-term treatment of recurrent episodes is effective. This approach may be more appropriate than a suppressive regimen in patients with infrequent recurrences.

Immunocompromised patients with recurrent herpes infections can be treated with either intermittent or chronic suppressive therapy. Clinically significant resistance, although rare, is more likely to be seen with prolonged or repeated therapy in severely immunocompromised patients with active lesions.

CONTRAINDICATIONS: Zovirax Capsules are contraindicated for patients who develop hypersensitivity or intolerance to the components of the formulation.

WARNINGS: Zovirax Capsules are intended for oral ingestion only.

PRECAUTIONS: General: Zovirax has caused decreased spermatogenesis at high doses in some animals and mutagenesis in some acute studies at high concentrations of drug (see PRECAUTIONS — Carcinogenesis, Mutagenesis, Impairment of Fertility). The recommended dosage and length of treatment should not be exceeded (see DOSAGE AND ADMINISTRATION).

Exposure of Herpes simplex isolates to acyclovir *in vitro* can lead to the emergence of less sensitive viruses. The possibility of the appearance of less sensitive viruses in man must be borne in mind when treating patients. The relationship between the *in vitro* sensitivity of Herpes simplex virus to acyclovir and clinical response to therapy has yet to be established.

Because of the possibility that less sensitive virus may be selected in patients who are receiving acyclovir, all patients should be advised to take particular care to avoid potential transmission of virus if active lesions are present while they are on therapy. In severely immunocompromised patients, the physician should be aware that prolonged or repeated courses of acyclovir may result in selection of resistant viruses which may not fully respond to continued acyclovir therapy.

Drug Interactions: Co-administration of probenecid with intravenous acyclovir has been shown to increase the mean half-life and the area under the concentration-time curve. Urinary excretion and renal clearance were correspondingly reduced.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Acyclovir was tested in lifetime bioassays in rats and mice at single daily doses of 50, 150 and 450 mg/kg given by gavage. There was no statistically significant difference in the incidence of tumors between treated and control animals, nor did acyclovir shorten the latency of tumors. In *2 in vitro* cell transformation assays, used to provide preliminary assessment of potential oncogenicity in advance of these more definitive life-time bioassays in rodents, conflicting results were obtained. Acyclovir was positive at the highest dose used in one system and the resulting morphologically transformed cells formed tumors when inoculated into immunosuppressed, syngeneic, weanling mice. Acyclovir was negative in another transformation system considered less sensitive.

In acute studies, there was an increase, not statistically significant, in the incidence of chromosomal damage at maximum tolerated parenteral doses of 100 mg/kg acyclovir in rats but not Chinese hamsters; higher doses of 500 and 1000 mg/kg were clastogenic in Chinese hamsters. In addition, no activity was found after 5 days dosing in a dominant lethal study in mice. In 6 of 11 microbial and mammalian cell assays, no evidence of mutagenicity was observed. At 3 loci in a Chinese hamster ovary cell line, the results were inconclusive. In 2 mammalian cell assays (human lymphocytes and L5178Y mouse lymphoma cells *in vitro*), positive responses for mutagenicity and chromosomal damage occurred, but only at concentrations at least 400 times the acyclovir plasma levels achieved in man.

Acyclovir has not been shown to impair fertility or reproduction in mice (450 mg/kg/day, p.o.) or in rats (25 mg/kg/day, s.c.). At 50 mg/kg/day s.c. in the rat, there was a statistically significant increase in post-implantation loss, but no concomitant decrease in litter size. In female rabbits treated subcutaneously with acyclovir subsequent to mating, there was a statistically significant decrease in implantation efficiency but no concomitant decrease in litter size at a dose of 50 mg/kg/day. No effect upon implantation efficiency was observed when the same dose was administered intravenously. In a rat peri- and postnatal study at 50 mg/kg/day s.c., there was a statistically significant decrease in the group mean numbers of corpora lutea, total implantation sites and live fetuses in the F₁ generation. Although not statistically significant, there was also a dose related decrease in group mean numbers of live fetuses and implantation sites at 12.5 mg/kg/day and 25 mg/kg/day, s.c. The intravenous administration of 100 mg/kg/day, a dose known to cause obstructive nephropathy in rabbits, caused a significant increase in fetal resorptions and a corresponding decrease in litter size. However, at a

maximum tolerated intravenous dose of 50 mg/kg/day in rabbits, there were no drug-related reproductive effects.

Intraperitoneal doses of 320 or 80 mg/kg/day acyclovir given to rats for 1 and 6 months, respectively, caused testicular atrophy. Testicular atrophy was persistent through the 4-week postdose recovery phase after 320 mg/kg/day; some evidence of recovery of sperm production was evident 30 days post-dose. Intravenous doses of 100 and 200 mg/kg/day acyclovir given to dogs for 31 days caused aspermatogenesis. Testicles were normal in dogs given 50 mg/kg/day, i.v. for one month.

Pregnancy: Teratogenic Effects: Pregnancy Category C. Acyclovir was not teratogenic in the mouse (450 mg/kg/day, p.o.), rat (50 mg/kg/day, s.c.) or rabbit (50 mg/kg/day, s.c. and i.v.). There are no adequate and well-controlled studies in pregnant women. Acyclovir should not be used during pregnancy unless the potential benefit justifies the potential risk to the fetus. Although acyclovir was not teratogenic in animal studies, the drug's potential for causing chromosome breaks at high concentration should be taken into consideration in making this determination.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when Zovirax is administered to a nursing woman. In nursing mothers, consideration should be given to not using acyclovir treatment or discontinuing breastfeeding.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS — Short-Term Administration: The most frequent adverse reactions reported during clinical trials were nausea and/or vomiting in 8 of 298 patient treatments (2.7%) and headache in 2 of 298 (0.6%). Less frequent adverse reactions, each of which occurred in 1 of 298 patient treatments (0.3%), included diarrhea, dizziness, anorexia, fatigue, edema, skin rash, leg pain, inguinal adenopathy, medication taste and sore throat.

Long-Term Administration: The most frequent adverse reactions reported in studies of daily therapy for 3 to 6 months were headache in 33 of 251 patients (13.1%), diarrhea in 22 of 251 (8.8%), nausea and/or vomiting in 20 of 251 (8.0%), vertigo in 9 of 251 (3.6%), and arthralgia in 9 of 251 (3.6%). Less frequent adverse reactions, each of which occurred in less than 3% of the 251 patients (see number of patients in parentheses), included skin rash (7), insomnia (4), fatigue (7), fever (4), palpitations (1), sore throat (2), superficial thrombophlebitis (1), muscle cramps (2), pars planitis (1), menstrual abnormality (4), acne (3), lymphadenopathy (2), irritability (1), accelerated hair loss (1), and depression (1).

DOSAGE AND ADMINISTRATION: Treatment of initial genital herpes: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 10 days (total 50 capsules).

Chronic suppressive therapy for recurrent disease: One 200 mg capsule 3 times daily for up to 6 months. Some patients may require more drug, up to one 200 mg capsule 5 times daily for up to 6 months.

Intermittent Therapy: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 5 days (total 25 capsules). Therapy should be initiated at the earliest sign or symptom (prodrome) of recurrence.

Patients With Acute or Chronic Renal Impairment: One 200 mg capsule every 12 hours is recommended for patients with creatinine clearance ≤ 10 ml/min/1.73 m².

HOW SUPPLIED: Zovirax Capsules (blue, opaque) containing 200 mg acyclovir and printed with "Wellcome ZOVIRAX 200" - Bottles of 100 (NDC-0081-0991-55) and unit dose pack of 100 (NDC-0081-0991-56).

Store at 15°-30°C (59°-86°F) and protect from light.

*In controlled studies, recurrences were totally prevented for 4 to 6 months in up to 75% of patients.

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ELECTROCARDIOGRAM OF THE MONTH

Tom Gray, D. O.
John W. Watson, M.D.
UAMS Division of Cardiology
Little Rock, Arkansas

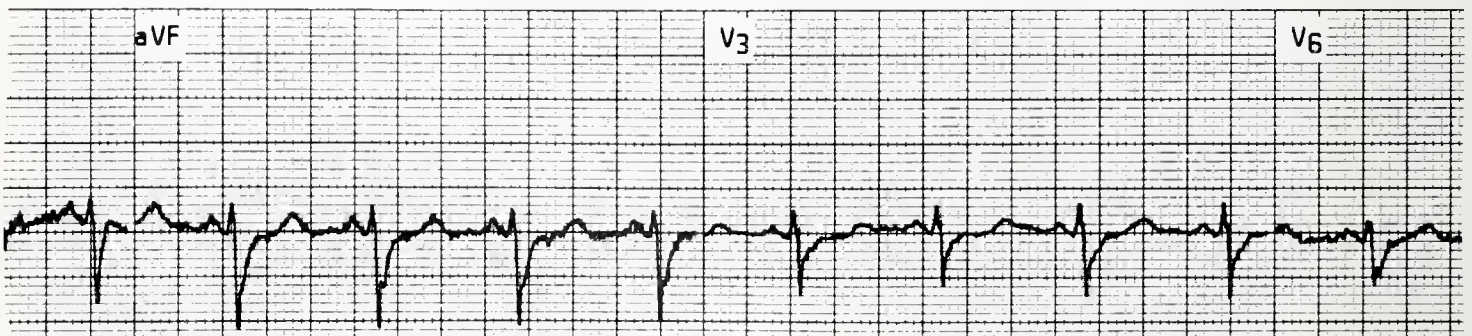
CLINICAL HISTORY:

J. D. is a 39-year-old man presenting for evaluation of chest pain. The cardiac examination was normal except for increased splitting of the second heart sound with respiration. What do you think about his baseline electrocardiogram?

DISCUSSION:

The cardiac mechanism is sinus at a rate of 95 beats per minute. The QRS duration exceeds 0.12 seconds with a clear pattern of right bundle branch block being present. The axis is leftward and small Q waves are noted in I and AVL. Thus, in addition to right bundle branch block, left anterior fascicular block may be present. The trace yields no explanation for the chief complaint but does help explain the increased split of S_2 .

The feature editor again thanks Dr. Gray for his assistance with this month's ECG.



Current Management of Short Bowel Syndrome in Children

Jay L. Grosfeld, M.D., and Frederick J. Rescorla, M.D.*

Short bowel syndrome in infancy is commonly a result of massive bowel resection due to post-natal midgut volvulus, necrotizing enterocolitis or an acquired intra-uterine intestinal atresia. A fourth group of babies includes those infants born with total colonic aganglionosis with extension of the aganglionic process to the mid or proximal small intestine. The etiology and clinical presentation of each of these conditions is quite different.

Midgut volvulus

Midgut volvulus is usually a result of a clockwise torsion of the bowel around the take off of the mesentery suspended from a very narrow pedicle that contains the superior mesenteric artery and vein. Embryologically this problem is related to an anomaly of rotation and fixation of the intestine as it returns from an extracoelomic position to the abdominal cavity between the sixth and tenth week of fetal life. Torsion of the vascular pedicle results in strangulation-obstruction leading to massive bowel infarction from the third portion of the duodenum, to the midtransverse colon.

The clinical presentation includes signs and symptoms of high (duodenal) obstruction. The infant usually has a normal birth and goes home from the hospital following delivery. The baby then gets a sudden illness characterized by bilious vomiting, irritability and hemodynamic collapse. In more than 75% of the cases this event occurs within the first month of life, but can occur later in a fourth of the cases. Certain associated conditions frequently co-exist with mal-rotation including diaphragmatic hernia, gastroschisis, omphalocele, duodenal atresia, biliary atresia, annular pancreas and the prune-belly syndrome. Diagnosis is achieved by a high index of suspicion, a gasless abdomen beyond the duodenum on plain x-ray and confirmation by either barium swallow or contrast barium enema. The former will demonstrate a duodenal obstruction with a cork-screwspiral appearance of the duodenum and absence of

a ligament of Treitz. The later study will show the cecum in the mid-upper abdomen. This diagnosis must be made promptly if bowel integrity is to be preserved. This condition is truly a surgical emergency. The infant must be prepared expeditiously for operation with vigorous fluid resuscitation using 20cc/kg of 5% Dextrose in lactated ringers solution. At operation, the clockwise volvulus is observed and should be reduced in a counter clockwise manner. Unfortunately, in many instances, significant portions of the intestine are non-viable resulting in the need for extensive enterectomy and the short bowel syndrome.

Acquired volvulus may also be encountered due to internal herniation around intestinal adhesions as a result of a previous laparotomy for some other condition.

Necrotizing Enterocolitis (NEC)

Necrotizing Enterocolitis (NEC) is an often catastrophic post-natal condition of the newborn (mainly pre-matures) that may be related to a transient episode of hypoxia, hypotension, splanchnic hypoperfusion and bowel anoxia due to a low flow state. This condition occurs in 1-2% of admissions to most neonatal intensive care facilities. The actual mechanism is not completely understood. NEC has been observed in infants with respiratory distress syndrome, heart failure with patent ductus arteriosus, cyanotic heart disease, following exchange transfusion, hyperosmolar feedings, hyperviscosity-polycythemia, sepsis with a hypotensive episode, apnea and after pharmacologic manipulation with drugs such as indomethacin, aminophylline and Vitamin-E. Most babies with NEC are formula fed and have bowel colonized by a mixed bacterial flora. Mucosal ulceration, bacterial invasion and an intraluminal substrate

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are probably required for this necrotizing process to occur. The process may be characterized by lethargy, increasing gastric residuals prior to the next attempted gavage feeding, abdominal distension, bilious vomiting, occult or gross rectal bleeding, abdominal wall erythema, oliguria, hypotension (due to hypovolemia), acidosis and disseminated intravascular coagulation. Progressive thrombocytopenia is frequently noted when the platelet count is serially monitored. Abdominal x-ray findings include pneumatosis intestinalis, the presence of mesenteric and portal venous air, pneumoperitoneum, fixed dilated bowel loops and occasionally a gasless abdomen with "ascites". Aggressive medical therapy includes respiratory support, fluid resuscitation, blood and platelet transfusions, antibiotics (ampicillin, tobramycin and clindamycin), orogastric drainage, cessation of enteral feedings and when hemodynamically stable parenteral nutrition. Indications for operation include pneumoperitoneum and failure of medical management (e.g., clinical deterioration characterized by hemodynamic collapse, persistent acidosis, oliguria and/or abdominal wall erythema). Recovery of murky brown fluid containing bacteria on gram-stain on abdominal paracentesis is also an indication for operation. The presence of portal vein air on plain abdominal x-ray is also evidence of advanced disease. At operation, the extent of bowel injury is variable, but may affect extensive bowel segments especially the distal half of the small intestine and the right colon. Appropriate surgical therapy often requires massive enterectomy, and formation of a temporary enterostomy.

Jejunileal Atresia

Intestinal atresia affecting the jejunum and ileum occurs by chance and is usually related to an intrauterine mesenteric vascular accident that may occur quite late in fetal life. The injury may be due to an intrauterine volvulus, intussusception, mesenteric hernia and choking off of the blood supply to the gut in a tight gastroschisis or omphalocele defect. Familial instances have been described for jejunal atresia alone as well as cases of multiple gastrointestinal atresias. Approximately 10% of the cases will be further complicated by cystic fibrosis.

The atresia may have a variable appearance with a spectrum of pathology that includes a simple mucosal web (type I), a fibrous band that separates the two blind atretic ends (type II), a large V-shaped mesenteric gap (type III, most common), "apple peel deformity" with a retrograde blood supply to the distal bowel (type IIIb), and instances of multiple atresias (type IV). Remaining bowel length will depend upon the extent of vascular compromise of the fetal intestine and the amount of prenatal bowel resorption. Approximately 35% of cases will be associated with significant short gut.

Total Colonic Aganglionosis

Hirschsprung's disease, characterized by absence of ganglion cells in Meissner's and Auerbach's plexuses is a

Table I. Late Surgical Procedures

Vagotomy + Pyloroplasty*
 Reversed Intestinal Segment*
 Colonic Interposition
 Recirculating Loops*
 Longitudinal Division (Bianchi)
 Ileo-cecal Valve Substitution
 Intestinal Neomucosa+
 Electrical Pacing+
 Small Bowel Transplantation+

* Not Advised

+ Experimental Procedure

relatively common cause of bowel obstruction in the neonate. This neurogenic condition starts at the internal anal sphincter and extends proximally, usually limited to the rectum or rectosigmoid in 75-80% of cases. The process may extend to involve the entire colon in approximately 5-15% of infants. Approximately 20% of these infants with total colonic involvement have extensions of the aganglionic process to the mid or proximal small bowel constituting a relatively rare but important cause of short bowel syndrome. The majority of infants with Hirschsprung's disease are the products of full term pregnancies and usually weight between 2.5 and 4.0 kg at birth.

Sixty-five percent of infants with total colonic aganglionosis are boys. There is a positive family history in 12% of cases and an increased incidence of Down Syndrome (3-5%). Clinical findings include abdominal distension, bilious vomiting and failure to pass meconium in the first 24 hours of life. While constipation is almost always present in the first week of life, occasionally these infants may demonstrate a fulminant, explosive form of diarrhea - designated the enterocolitis of Hirschsprung's disease. Plain x-ray may show evidence of small bowel obstruction and a significant number of babies show a foreshortened microcolon with blunted splenic and hepatic colonic flexures on barium contrast enema. It is not uncommon for some of the infants to have been referred having previously undergone exploration with "no source of obstruction" found. Diagnosis is finally achieved by rectal biopsy that confirms Hirschsprung's disease. At lapotomy, multiple intestinal biopsies may be required to establish a proper site in the mid or proximal small bowel for creation of a decompressing enterostomy containing ganglion cells.

Definition

Short gut is defined as having less than 50% of the total expected small bowel length at the time of initial operation. The length of remaining bowel must be carefully measured and compared to the expected normal length of bowel which

varies according to gestational age, body weight and height of infant. Measurement can be subject to error due to inadvertent stretching of bowel and should be performed along the mesenteric border with evaluation of the arteriae rectae in order to accurately assess bowel length following massive resection.

Autopsy studies demonstrated that total bowel length in infants varied between 14± 22 cm for 19 to 27 week gestational age infants to 304 ± 44cm for infants greater than 35 weeks gestational age. When jejunum and ileum were considered the average lengths were 114 cm and 248 cm, respectively.

Previous concepts of a decade ago concerning infant survival and bowel lengths were based on studies which correlated a successful outcome with at least 15 cm of jejunum or ileum plus an intact ileocecal valve or greater than 40 cm if the ileocecal valve had been resected. These parameters for survival must be reassessed in view of bowel lengthening in some preterm infants and current therapies such as total parenteral nutrition, well defined elemental diets, and home hyperalimentation.

Normal Bowel Embryology and Functional Development

In order to understand the response of the neonatal intestine to massive bowel resection, some insight into normal bowel embryology and developmental function is important. The major portion of the small intestine is of midgut derivation, supplied by the superior mesenteric artery. The small bowel is anatomically intact in the 20 week fetus and functionally capable by 26 weeks. Crypts, villi and mesenteric lymph nodes appear and active amino acid transport is present at 14 weeks. Protein hydrolysis occurs mainly in the proximal small bowel and is dependent on pancreatic proteases and brush border cytosol peptidases. Neonates can absorb protein, however, the younger the infant the less the capacity to digest protein.

Prematures and small for gestational age babies have relatively inefficient lipid digestion. Fat digestion and

absorption is determined by intraluminal concentration of lipases and bile acid, dietary calcium and fat. Lipid hydrolysis occurs mainly in the proximal small bowel aided by pancreatic lipase plus bile acids. Premature infants have low intraluminal lipase and bile salt concentrations, and a reduced bile acid pool size (30-50% of a full term infant which is only 50% that of the adult.) Short gut further reduces the bile acid pool size due to ineffective ileal absorption on bile acids and a jejunum more permeable to bile acids in neonates. This results in a defective enterohepatic bile circulation and increased fecal losses.

Lactose and sucrose levels are adequate in the full term baby. Maltase, isomaltase and sucrose are enzymes present in the 10 week fetus. By the 28th-34th week, enzyme levels are at 70% of the term infant. Lactase is present later and is 30% of full term levels at 28-34 weeks of gestation. Premature infants have low lactase levels and poor tolerance of lactose formulas. Those that suffer from malnutrition and/or chronic diarrhea also have poor regenerative capacity of the intestine.

Hydrolysis of disaccharide to monosaccharides is minimal in the 3-4 month fetus. In the some fetus maltose, sucrose and isomaltose are utilized but not lactose. Young infants lack amylase in salivary and pancreatic secretions (only 15% of adult levels). Uptake of monosaccharides occurs by active transport complex from a sodium pump for galactose and glucose and by energy dependent diffusion for fructose.

Infants are more susceptible to dehydration and electrolyte imbalance due to a flux across the bowel mucosa and weak adaptive conservation mechanisms. High osmolar diets may aggravate permeability resulting in excess secretion and electrolyte imbalance. Intrauterine and postnatal malnutrition may significantly restrict the morphologic and biochemical development of the gastrointestinal tract.

Mucosal cell turnover rate is equivalent to the generation time of crypt cells. It is slower in younger animals. Replication of the ileal crypt cells follows a regular rhythm. In a 3-week-old cat, generation time is 10-11 hours with 6 hour DNA synthesis time. Severe malnutrition may result in a combined atrophy of villi and crypts within the damaged intestinal mucosa.

Table II. Etiology of Short Bowel Syndrome: 76 Cases

Necrotizing Enterocolitis	30
Jejunioileal atresia	19
Total Colonic Aganglionosis with mid or proximal small bowel involvement	9
Malrotation with Volvulus	7
Gastroschisis	5
Adhesive Bowel Obstruction with Volvulus	4
Trauma	2

Intestinal Adaptation After Small Bowel Resection

Adaptation is dependent on the extent and site of resection, adaptive changes in the remaining intestine and whether disease persists in the remaining bowel. Bowel affected by midgut volvulus, necrotizing enterocolitis or enterocolitis associated with total colonic aganglionosis may have sustained significant ischemic mucosal damage which interferes with healing, adaptation and delays tolerance of enteral feedings. Histochemical evaluation of atretic bowel segments demonstrate hyperplasia of ganglion cells in dilated bowel just proximal to the atresia with a loss of acetylcholinesterase activity in the ganglia. ATP-

ase in smooth muscle wall is absent in the atretic area as well. The antimesenteric side is more depleted than the mesenteric surface. Effective peristalsis can be expected to occur only if a bowel anastomosis is placed proximal to a point of maximal distension. Abnormalities are seen with decreased ATP-ase in the villus brush border and in bowel distal to the atreasias as well. Massive distension and abnormal motility with inadequate peristalsis will often exist in the surviving proximal short bowel and is referred to as "anatomic dysfunction".

Although there are few studies in man, adaptation after massive bowel resection had been extensively monitored in the experimental animal. Morphologic changes include an increase in the circumference, thickness of bowel wall, increase in villus height, increase in crypt depth and an increase rate of cell proliferation (in proliferation zone in crypt) and migration rate to the villus tip. An increase in the number of epithelial cells per unit length of villus signifies hyperplasia of mucosal cells. Cell proliferation rate and migration are accelerated so that each cell has a shortened life span and they may not be functionally mature. An increase rate of DNA synthesis signifies new nuclei being formed (e.g. true cellular hyperplasia).

These morphologic changes are most striking following resection of the proximal and mid small bowel. Similar but less striking changes may be seen in the jejunum after massive distal bowel resection. Colonic mucosal hyperplasia can be seen after massive ileal resection, while ileal mucosal hyperplasia has been observed following extensive colectomy.

Functional adaptation primarily depends on an increased number of absorptive cells that results in an increase in nutrient absorption and water and electrolyte transport. Rapid transit through the gut is insufficient for adequate digestion. Most nutrients are absorbed from the proximal intestine: the distal duodenum and jejunum for absorption of iron, the jejunum for the absorption of calcium and folic acid and the ileum for active transport of Vitamin B₁₂ and bile salts. Adaptation results in enhanced absorption/cm of gut of fat, carbohydrates, protein, glucose, sucrose, maltose, electrolytes, water, calcium, Vit B₁₂ and bile acids. An increase in the specific activity of a number of mucosal enzymes (Na-K+ -ATP-ase, enterokinase and peptidehydrolases), pentose-phosphate shunt enzymes and pyrimidine biosynthetic enzymes is observed. Lactose absorption is often very impaired related to rapid transit and reduced total lactase activity. Decreased levels of disaccharidases, glycolytic enzymes, adenylcyclase and lipid esterase probably indicate the presence of functionally immature cells.

Regulation of Adaptation

A number of mechanisms seem to regulate bowel adaptation by stimulating intestinal hyperplasia. One of the most important components is an increased exposure of the bowel lumen to dietary nutrients. Postresection cellular

hyperplasia does not occur readily if oral intake is denied and the patient receives total parenteral nutrition alone. In addition, exclusion of bowel in a Theiry-Vella loop similarly prevents adaptation and results in mucosal hypoplasia. Bowel thickening may also be suppressed without luminal nutrients.

Cellular hyperplasia may also be stimulated by biliary and pancreatic secretions. Pancreatic secretions can influence the concentration of mucosal enzymes of the villus brush border (peptides). A pancreatic hormonal factor may also be involved. Transplanting the pancreatic duct to ileum causes ileal hyperplasia. Absence of bile for 48 hours causes a significant decrease in crypt cell turnover which can be enhanced by perfusing the bowel with sodium taurocholate. This suggests bile acids in the bile may also exert some adaptive influence. Enteric hormones may play some role in addition to local nutritional factors yet to be determined.

An additional factor is the presence of an intact ileocecal valve. Transit time, nutrient absorption and mortality may be dependent on the presence or absence of the ileocecal valve. A more rapid transit, decrease absorption, proximal bacterial overgrowth and increased mortality may be expected following massive distal bowel resection including the ileocecal valve. Following massive ileal resection, acquired hypogammaglobulinemia has been clinically observed to last for about one year in the presence of intact cellular immunity. Laboratory evidence of increased mortality following endotoxin challenge or live *E. coli* administration in animals with massive distal bowel resection may play an important role in humoral immunity. This is an important observation as sepsis is often a cause of mortality in infants with short gut.

Therapy

Therapy of the short gut syndrome in part depends on the underlying cause, the site resected, and the length of remaining bowel.

Operative Measures

At operation, every attempt should be made to preserve as much bowel length as possible. In instances of volvulus or NEC, doppler evaluation of viability and fluorescein dye studies may be useful in efforts to preserve bowel length. Following adequate resuscitation, "second look" laprotomy within 24-48 hours of the initial procedure may be useful in highly selected cases. Temporary enterostomies to evaluate bowel margins and avoidance of primary anastomosis may also be of some importance. In patients with intestinal atresia with dilated proximal jejunum, an antimesenteric tapering enteroplasty or antimesenteric intestinal plication may preserve bowel length, reduce bowel diameters and restore early peristalsis. In instances of total colonic aganglionosis with significant extension of aganglionosis up into the mid or proximal small bowel, an antimesenteric patch enteroplasty using aganglionic ileum or colon may increase the absorptive surface of the small bowel signifi-

**Table III. Short Bowel Syndrome Results:
76 Cases**

	Number of Cases	Percentage
Survivors	67	88
Deaths	9	12
TPN related		
liver failure	5	
Sepsis	3	
Bronchopulmonary dysplasia	1	

cantly and allow for an eventual pull-through procedure to be performed.

Medical Management

The advent of total parenteral nutrition (TPN) is perhaps the key factor that has improved the survival rate of infants with short gut in the past two decades. TPN gives the physician the ability to deliver adequate calories, protein, glucose and fat to allow appropriate growth. TPN also buys time to allow for intestinal adaptation to occur until all nutrients can be administered by the enteral route. Highly defined, easily digestible elemental diets have also played an important role in the change over from parenteral dependence to enteral feedings. Formulas that contain lactose and long-chain fats are avoided. Medium chain triglyceride solutions, fructose and polycose^R can be enteral additives. Hyperosmolar feedings must be administered gradually and with great care to avoid injury to the hyperplastic mucosa which may result in a secretory diarrhea. Some dilute enteral feedings must be given early on an intraluminal nutrients are essential for cellular and villus hypertrophy to occur. The use of Broviac or Hickman silastic catheters have improved TPN care so that after appropriate parenteral training, in many instances, this may eventually be carried out as a "home hyperalimentation" program. Enteral intolerance to carbohydrates including glucose may require a hyposomolar carbohydrate-free diet to avoid severe diarrhea with excessive reducing substances in the stool. Fructose containing enteral formulas may also be useful. More complex substances can be added with time including maltose, sucrose, certain disaccharides and medium-chain triglyceride oil.

The use of cholestyramine (1.0 mgm q 4-6 hr), a bile acid binding resin may reduce the frequency of stools and allow more water absorption in the remaining colon to occur. Loperidine (Immodium^R) may be useful in infants older than six months of age. Adequate supplementation of Vitamin B₁₂, folic acid, other vitamin complexes, sodium citrate and potassium elixir are essential. Vitamin K is required while on TPN.

Mineral deficiencies have developed even when patients are receiving the usual daily recommended allowances on TPN. This is probably due to excess losses via an enterostomy or to diarrhea. Ricketts (Ca++ and phosphorus), zinc, copper, and magnesium deficiency may occur. Higher daily doses of Vitamin D and the above electrolytes and minerals are required. Intravenous fat solutions (10% and 20% Intralipid^R) have greatly reduced the development of fatty acid deficiencies.

In the premature and small for date baby, TPN may result in severe cholestasis. This is probably related to an inability to handle the 2.5% amino acid concentration commonly employed in pediatric TPN solutions. Taurine is probably an essential amino acid in the premature. Taurine deficiency may lead to formation of a toxic bile salt that may result in cannicular injury and severe cholestasis. TPN related cholestasis in the premature is not improved by cessation of glucose or fat. However, the bilirubin and alkaline phosphatase levels may be reduced by cessation of the amino acid solution. The amino acid content of TPN solutions may need to be modified in the premature infant with immature liver function. It is suggested that the amino acid concentration not exceed 1.5% in the premature baby. TPN is essential in the early phase on intentional adaptation but the neonate must be carefully monitored for both biochemical (metabolic) as well as septic catheter complications. Although cholestasis was once thought to be a completely reversible problem, some infants on long term TPN develop cholestasis which progresses to a fatal form of liver disease characterized by severe jaundice (bilirubin greater than 30.0 mg/dl), enzyme elevation, hypoalbuminemia and bleeding diathesis.

The period required for adaptation to occur is quite variable and may take from 6 months to 3 years to be completed. Any cause of intestinal mucosal injury will set the process back considerably. Patience and long term diligence are real virtues in the management of such patients. Assessment of the patient's weight, serum albumin and transferrin, skinfolds, periodic evaluation of transit time and monitoring the consistency and number of bowel movements are useful clinical guides. Occasionally quantitative evaluation of carbohydrate, protein, and fat absorption may be useful; however, these tests are also time consuming and very expensive.

Despite the above mentioned techniques, there are some infants who are very poor responders to therapy. In some patients adjunctive surgical procedures have been devised (Table I).

Reversed small bowel segments have been noted to increase transit time in experimental animals. Warden reported clinical success using a 3.0 cm reversed segment. Other reports, however, suggest that this procedure has not been uniformly successful.

Isoperistaltic colonic interposition has also been noted to increase transit time in both the experimental and clinical testing. The use of an antiperistaltic colon segment has also

been attempted however, bowel obstruction has been a frequent complication of this technique. Creation of recirculating loops of intestine have been attempted, however, this technique is associated with development of the blind loop syndrome as well as an increased mortality.

Bianchi described a bowel lengthening procedure in pigs which involves longitudinal division of the bowel leaving one half of the mesenteric blood supply with each half of the bowel.

Several additional procedures have been successful in the experimental setting and are currently awaiting clinical application. Replacement of the ileo-cecal valve as a nipple valve intussusception in either a jejunocolic or ileocolic position increased survival, transit time and favorably affected weight change and growth in experimental studies. This procedure has also been noted to decrease the anaerobic bacterial counts in the proximal intestine. In addition, an increase in transit time using a submucosally tunnelled valve of ileum into colon as a replacement for the ileo-cecal valve in dogs has been demonstrated.

Binnington and associates reported the use of a colon patch to increase the mucosal surface area in an experimental model. They noted near complete coverage of the colon with a neomucosa similar to normal jejunal mucosa in terms of enzyme level determinations. This procedure has been successfully used to treat animals with an experimentally induced short gut demonstrating an increased weight gain in treated animals compared to controls. The feasibility of growing intestinal neomucosa on rectus muscle flaps attached to the antimesenteric surface of small intestine in rabbits has been demonstrated.

Retrograde intestinal pacing in dogs results in increased absorption of carbohydrate and water as well as increased body weight, decreased fecal fat and decreased nitrogen losses.

Although renal, hepatic, and cardiac transplantation programs have had considerable clinical success, interest in small intestinal transplantation has remained in the laboratory setting. The development of new immunosuppressive agents such as cyclosporine A, the recognition of graft tolerance in the experimental animal and the demonstration of prevention of graft vs. host disease with experimental irradiation of the graft prior to insertion has rekindled interest in clinical small bowel transplantation for the future.

Clinical Material

We have treated 76 infants and children with short bowel syndrome at the James Whitcomb Riley Hospital for Children, Indiana University Medical Center from 1972-1986. Fifty of the patients were boys and 26 were girls. Thirty-seven infants were premature, 32 were full-term infants, while seven were older children. Diagnosis included NEC in 30 babies, jejunoileal atresia in 19, total colonic aganglionosis with proximal small bowel extension in 9, malrotation with midgut volvulus in 7, gastroschisis in 5, trauma

in 2, adhesive bowel obstruction in 4, children previously operative upon for retroperitoneal tumor in 3, and ulcerative colitis in 1 (Table II).

The mean length of remaining bowel was 61.0 cm with a range of 11.0-120 cm in the babies and was 114-150 cm in older patients. The ileo-cecal valve was resected in 41 cases and remained intact in 35. Resection of atretic and gangrenous bowel was accomplished in 63 with tapering proximal antimesenteric enteroplasty and primary anastomosis was done in 14 cases and temporary enterostomy in 49. Delayed anastomosis was subsequently accomplished from 30-60 days later. Second-look laparotomy at 24-48 hours was useful in two of four cases (NEC, midgut volvulus) in preserving bowel of questionable viability. Nine infants with total colonic aganglionosis and proximal small bowel extension underwent initial simple enterostomy in bowel with biopsy proven ganglion cells. Seven of the babies subsequently had pull through procedures with an antimesenteric aganglionic patch enteroplasty to improve intestinal absorption.

All patients were managed with total parenteral nutrition (TPN) and early enteral feedings using highly defined diets (elemental) administered by an hourly drip feeding technique. In most, this was accomplished via a Stamm gastrostomy. Home hyperalimentation was attempted when 50% of the calories were enteral. Intestinal adaptation required from 3 months to three years. Frequent set backs were related to catheter sepsis, roto-virus infection, carbohydrate intolerance, and liver dysfunction. Three patients developed gallstones and required subsequent cholecystectomy.

Survival was achieved in 67 of the 76 patients (88%) [Table III]. There were nine deaths in the series including four infants with NEC, three with midgut volvulus, and two with gastroschisis complicated by intestinal atresia. Deaths were related to sepsis in three cases, bronchopulmonary dysplasia in one, and TPN associated cholestasis progressing to fatal liver disease in five.

Conclusion

At the present time, NEC is the most common cause of short gut in infancy. Mortality is 12% and is most frequently due to TPN-related liver disease and sepsis. Currently, the overall survival rate is 88%. Weight has been adequate (10-25th percentile) however, longitudinal growth had been somewhat harder to achieve as many of the long term survivors are short-statured. Continuing losses of bile salts may affect the enterohepatic circulation resulting in production of a more concentrated cholesterol, causing an increased incidence of gallstones in short gut patients. Prolonged use of TPN may also increase the rate of cholestasis and bilirubin gallstone formation. Any associated illness (e.g., gastroenteritis, flu) may cause severe diarrhea and electrolyte and water absorption problems. Long term follow-up into adult life is important. The quality of life for long-term survivors had been quite good.

Suggested Reading

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References should be limited to ten; if more than ten are listed, the author(s) may designate the ten most significant to be printed and readers will be referred to the authors(s) for the complete list. References must contain, in the order given: Name of author(s), title of article, name of periodicals with volume, page, month and year. References should be numbered consecutively.

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Minutes of the House of Delegates Fall Meeting

October 4, 1987

Riverfront Hilton, North Little Rock

Speaker of the House, Amail Chudy, called the House of Delegates to order at 1:40 p.m. on Sunday, October 4, 1987. Payton Kolb gave the invocation.

Voting members of the House who registered were: ARKANSAS, John Hestir; BAXTER, Robert Baker; BENTON, Richard N. Pearson; BOONE, Mahlon Maris; CHICOT, John P. Burge; CLEBURNE, Thomas L. Eans; CRAIGHEAD-POINSETT, Joe H. Stallings, Jr., Joe Verser; FAULKNER, J. J. Magie; FRANKLIN, C. C. Long; GREENE-CLAY, J. Larry Lawson, Roger Cagle; HEMPSTEAD, James Branch; INDEPENDENCE, Jim E. Lytle; JEFFERSON, Lloyd G. Langston, John Crenshaw, William Nuckolls, George Roberson; LITTLE ROVER, James D. Armstrong; MILLER, A. E. Andrews, Jr.; MISSISSIPPI, Sybil Hart, Merrill J. Osborne; OUACHITA, Cal R. Sanders, Lawrence F. Braden; PHILLIPS, L. J. P. Bell, Robert D. Miller, Jr.; POPE, James M. Kolb, Jr., Robert Bell; PULASKI, W. Ray Jouett, James R. Weber, Amail Chudy, William N. Jones, Paul Cornell, Charles Logan, Robert Shannon, Mayne Parker, Charles Rodgers, Bruce Schratz, Fred O. Henker, III; R. Jerry Mann, Robert G. Valentine, Jr.; Raymond Biondo, Harold Hutson, W. Payton Kolb, Purcell Smith, Jr.; SEBASTIAN, Morton C. Wilson, A. C. Bradford, David Busby, Paul Wills; TRI-COUNTY, Michael Moody; UNION, George Warren, Wayne Elliott; VAN BUREN, John A. Hall, WASHINGTON, Mitch Singleton and Morriss M. Henry.

Speaker Chudy asked the House to stand in a moment of silence for their friend, Frank Morgan, who recently passed away.

Speaker Chudy recognized Chairman of the Council, Larry Lawson. Chairman Lawson gave the report of the Council which read as follows: "The Council recommends to the House of Delegates we vote for a \$100.00 annual dues increase to fund a Governmental Affairs Department. This dues increase would be effective for 1988 and continue thereafter." Charles Logan seconded the motion.

Speaker Chudy recognized Ken LaMastus who discussed the handouts distributed at the door which included the following: a history of the Society's revenue and expenditures since 1983 with the 1987 budget; a list of dues by state and county; a draft budget for the Governmental Affairs Department; and a history of the membership of the Society by membership category since 1982. He also asked each of those present to help back home with explaining the importance of the business being voted on. The motion passed by unanimous vote.

After several positive comments and light discussion, the House adjourned.



Make the Time and You Can Make a Difference

C. L. Montgomery, M.D. *

Make the time and you can make a difference. You will hear this statement time and time again from those of us at AMPAC and from those in the medical community who are politically active. You will hear it for one simple reason: Because it is true.

One of the most common complaints I hear from legislators, particularly when I feel compelled to complain, is "Nobody told me about that. I just didn't know." Then I have to ask myself, "Why not?"

Even though lots of people complain about politicians, the truth is that most of the time they have a pretty tough road to travel. Every day brings new issues and new problems. Add these issues and problems to the complexities of medicine, factor in time and experience constraints facing each legislator and the result often is misunderstanding.

The answers to these problems may be even more complex. Certainly, we can tell medicine's side of the story and hope to have legislators to hear us. That's simple enough. But, to be frank, it's not terribly realistic. We must play by the rules of American Politics, delineated by American Democracy, and this means that to have our story heard, we must be a part of the process.

There are a great many people in America today who want their own views heard. They believe in their cause just as passionately as we do in ours. Sometimes, these goals come into conflict. Physicians have a particularly weighty burden to carry. Our knowledge, advice and role in the process has an affect on the health of all members of American society.

Because people other than medically-trained physicians are making medical decisions, sometimes life-and-death decisions, we in the medical community have a moral and ethical responsibility to stand up and be heard. Good patient care! That's our bottom line.

Legislators are human beings caught in the same human world that captures all of us. They react to other human

beings in the same, sometimes peculiar ways, that all of us do. I can't just walk into a lawmaker's office and say, "Listen to me, I am a medical expert." That legislator must know who I am, know that my judgment is trustworthy, know that I have been concerned about these issues for some time. I must have a history with that legislator in order to be credible.

Learn to know your congressmen, your state senator, and representative personally. Visit with him, assist in his campaign personally, urge your PAC to support him. Visit with him in your state capitol during sessions. Visit with him in his Washington office. When you reach a comfortable *first name* basis, you will have your concerns sincerely addressed.

I cannot think of any better means of earning a politician's trust and respect than by participating in his political campaign. The politician as candidate is far more accessible than the politician as lawmaker. That is the way the system works. During a campaign, the candidate's primary goal is to reach you, the voter. Those who work directly with the candidate, those who offer help at some point during the campaign, those who are ready when the candidate needs them, can become part of a two-way communications network.

Dialogue between a candidate and voter-volunteer typically does continue beyond election day. The best time to make use of the lines of communication already set in place is when an important issue comes up for vote.

Do you, busy as you are, have the time? I would wager each one of you has a particular hobby or favorite charity that lays claim to some of your time. I believe it is also a safe bet that you are a caring, concerned person; most people don't find their way into medicine unless they have these characteristics.

So, it becomes a matter of priorities. You know as a member of the medical community that political involvement is not a luxury, but a necessity. You also know that individuals, particularly those well-regarded for their knowledge and education, can make a crucial difference. Finally, we are all well aware that physicians are masters at carving time out of hectic days and busy lives for those priorities which rank high in importance.

You can make the time; you can make a difference. You must make the effort.

*Presented at AMPAC Political Education Seminar, October, 1987, Holiday Inn, Little Rock, Arkansas. Dr. Montgomery is on the AMPAC Board of Directors and is an Alternate Delegate to the AMA House of Delegates.

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THINGS TO COME

DECEMBER 1-3

Cardiology Update. Sponsored by the Institute for Medical Studies. The Hotel-Inter-Continental, Houston, TX. Up to 12 Category I credit hours available. Further information: Lisa Krehbiel, Institute for Medical Studies, 30131 Town Center Dr., Suite 215, Laguna Niguel, CA 92677; (714) 495-4499.

DECEMBER 3-4

Surgical Health Policy and Finance. Sponsored by the Department of Surgery, Long Island Jewish Medical Center. The Waldorf Astoria, New York, NY. Fourteen Category I credit hours. Fee: \$200, residents; \$400, all others. Further information: Ann J. Boehme, Long Island Jewish Medical Center, New Hyde Park, NY 11042; (718) 470-8650.

DECEMBER 4

Diagnosis and Treatment of the Emotionally Disturbed Child and Adolescent. Sponsored by the Rivendell Children and Youth Center. Excelsior Hotel,

8:00 a.m. - 5:00 p.m., wine and cheese reception to follow program. 4.5 Category I credit hours. Further information: Margo Haizlip, (501) 372-3647.

DECEMBER 7-11

Noninvasive Vascular Diagnosis by Doppler Ultrasound. Sponsored by the Institute for Medical Studies. Washington, D.C. Up to 30 Category I credit hours available. Further information: Lisa Krehbiel, Institute for Medical Studies, 30131 Town Center Dr., Suite 215, Laguna Niguel, CA 92677; (714) 495-4499.

DECEMBER 8-10

Cardiology Update. Sponsored by the Institute for Medical Studies. The McCormick Center Hotel, Chicago, IL. Up to 12 hours Category I credit available. Further information: Lisa Krehbiel, Institute for Medical Studies, 30131 Town Center Dr., Suite 215, Laguna Niguel CA 92677; (714) 495-4499.

KEEPING UP

Cholesterol: Current Concepts for Physicians

Self Study Course for Physicians. Sponsored by the National Health, Lung and Blood Institute. A national cholesterol education program is available through the Arkansas Medical Society office in which a physician studies at home. Two hours Category I credit. Further information: David Wroten, Arkansas Medical Society, P. O. Box 5776, Little Rock, AR 72215; (501) 224-8967.

AIDS

December 1, 7:00 p.m. Presented by Terry Yamauchi, M.D. Sponsored by AHEC - Northwest. Park Inn, Fayetteville. One hour Category I credit. Dutch treat buffet.

Individualized Care vs. Step-Care

December 1, 12:30 p.m. Presented by Charles Marsh, Pharm D. Sponsored by AHEC - Fort Smith. Sparks Regional Medical Center, Medical Library. 1 Category I credit hour.

Diagnosis and Treatment of the Emotionally Disturbed Child and Adolescent

December 4, 8:00 a.m. - 5:00 p.m. Sponsored by the Rivendell Children and Youth Center. Excelsior Hotel, Little Rock. Wine and cheese reception to follow program. 4.5 Category I credit hours. Further information: Margo Haizlip, (501) 372-3647.

ATLS Provider Course

December 5, 8:00 a.m. - 7:00 p.m. and December 6, 8:00 a.m. - 4:00 p.m. Presented by Robert W. Barnes, M.D., and Charles D. Mabry, M.D. Sponsored by the UAMS Office of Continuing Education for Physicians. UAMS Education Building, Little Rock. Sixteen Category I credit hours. Fee: \$425.00.

Child Sexual Abuse Examinations

December 11, 12:30 p.m. Presented by Russell Williams, ACSW, LCSW. Sponsored by AHEC - Fort Smith. Sparks Regional Medical Center, Medical Library. 1 Category I credit hour.

Symposium on Obstetric and Gynecologic Ultrasound

December 12, 8:00 a.m. - 5:00 p.m. Presented by Teresita L. Angtuaco, M.D., and J. Gerald Quirk, M.D. Sponsored by UAMS Continuing Education for Physicians. UAMS, Education Building, Room G131 A/B. Fee: \$75, physicians; \$25, technologist/nurse. 7 Category I credit hours.

Ultrasound Update 1987

December 12, 7:30 a.m. - 5:00 p.m. Presented by Terry Angtuaco, M.D. Sponsored by UAMS Office of Continuing Education for Physicians. UAMS Education Building, Room G131A/B, Little Rock. 7 Category I credit hours. Fee: \$75, physicians; \$25, technicians.

Cystic Fibrosis

December 15, 12:30 p.m. Presented by Louay Nassri, M.D. Sponsored by AHEC - Fort Smith. Sparks Regional Medical Center, Medical Library. 1 Category I credit hour.

Colposcopy and Endometrial Biopsy

December 16, 12:00 noon to 2:30 p.m. Presented by Herbert T. Smith, M.D. Sponsored by AHEC - Fort Smith. FMC. 1 Category I credit hour.

Pediatric Allergy Pitfalls-Controversies

January 12, 12:30 p.m. Presented by J. T. Howell, M.D. Sponsored by AHEC - Fort Smith. Sparks Regional Medical Center, Medical Library. 1 Category I credit hour.

Parenteral Feedings

January 14, 12:00 noon. Presented by Mary Gress, R.D. Sponsored by AHEC - Fort Smith. Sparks Regional Medical Center, 7th Floor Dining Room. 1 Category I credit hour.

Anxiety: Patient and Physician

January 16, 8:30 a.m. - 2:00 p.m. Presented and sponsored by Baptist Medical Center. Baptist Medical Center, Shuffield Auditorium. Fee: \$25, physicians; \$15, other health care professionals. 3.75 Category I and AAFP credit hours. 3.75 contact hours for nurses.

Drug Interactions

January 19, 12:30 p.m. Presented by Charles Marsh, Pharm D. Sponsored by AHEC - Fort Smith. Sparks Regional Medical Center, Medical Library. 1 Category credit Hour.

Cholesterol, Fat Controlled Diets

January 28, 12:00 noon. Presented by Betty Quitt, R.D. Sponsored by AHEC-Fort Smith. Sparks Regional Medical Center, 7th Floor Dining Room. 1 Category I credit hour.

Recurring Education Programs

EL DORADO - AHEC

Behavioral Sciences Conference, first and fourth Friday, 12:15 p.m., AHEC - South Arkansas.
Chest Conference, third Wednesday, 12:30 p.m., Warner Brown Hospital
Fracture Conference, third Tuesday, 12:15 p.m., AHEC-South Arkansas
Gynecology-Pathology Conference, second Friday, 12:15 p.m., AHEC-South Arkansas
Internal Medicine Conference, first, second and fourth Wednesday, 12:15 p.m., AHEC-South Arkansas
Pathology Conference, second Tuesday, 12:15 p.m., AHEC-South Arkansas
Pharmacology Conference, second Thursday, 12:15 p.m., AHEC-South Arkansas
Obstetrics-Gynecology Conference, fourth Thursday, 12:15 p.m., AHEC-South Arkansas
Surgical Conference, first, second and third Monday, 12:15 p.m., AHEC-South Arkansas
Tumor Clinic, fourth Tuesday, 12:15 p.m., AHEC-South Arkansas

FAYETTEVILLE - AHEC NORTHWEST

City Hospital Staff Meeting, second Friday, 12:00 noon, Fayetteville City Hospital
Medicine Teaching Conference, first, third and fifth Thursday, 1:00 p.m., AHEC - NW, 241 W. Spring, Fayetteville
Nephrology Lecture Series, fourth Thursday, 12:30 p.m., AHEC- NW, 241 W. Spring, Fayetteville
Rheumatology Lecture Series, first Tuesday, 12:30 p.m., VA Medical Center.

FAYETTEVILLE - VA MEDICAL CENTER

Medical Conference (varying topics), each Wednesday, 12:15 p.m., 3A Conference Room
Pathology/Mortality Conference, each Friday, 12:30 p.m., 3A Conference Room

FORT SMITH-AHEC

Cardiology Conference, first Wednesday, 12:00 noon, Sparks Regional Medical Center, 4th Floor Conference Room
Neurology Conference, second Thursday, 12:30 noon, Sparks Regional Medical Center, Medical Library

HOT SPRINGS-AMI NATIONAL PARK MEDICAL CENTER

Continuing Medical Education Luncheon for Medical/Dental Staff, varying topics, second and fourth Friday, 12:30 p.m., Classrooms, AMI National Park Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, first and third Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Annex Building
Arkansas Methodist Hospital CME Conference, last Friday, 7:00 a.m., Arkansas Methodist Hospital, Paragould
Cherokee Village Tumor Conference, third Monday, 6:00 p.m., Ozark Baptist Memorial Hospital, Cherokee Village, every four months.
Chest Conference, fourth Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room
Independence County Medical Society, second Tuesday, 7:30 p.m., White River Medical Center, Batesville
Interesting Case Conference, second and fifth Tuesday, when applicable, 12:00 noon, St. Bernard's Dietary Conference Room
Kennett Tumor Conference, second Tuesday (every other month), 12:00 noon, Twin Rivers Regional Medical Center, Kennett, Mo.
Methodist Hospital of Jonesboro CME Staff Conference, second Tuesday, 7:30 p.m., Cafeteria, Methodist Hospital of Jonesboro
Monthly Medical Lecture Series, third Tuesday, 7:30 p.m., rotates each month between Walnut Ridge and Pocahontas
Newport Tumor Conference, second Wednesday, 12:00 noon, rotates each month between Harris Clinic and Newport Hospital
Perinatal Conference, second Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Piggott Tumor Conference, third Wednesday, 12:00 noon, Piggott Hospital, every four months.
Poplar Bluff Tumor Conference, third Wednesday, 12:00 noon, Lucy Lee Hospital, Poplar Bluff.
Tumor Conference, fourth Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Wynne Tumor Conference, third Monday, 6:00 p.m., Grecian Steak House, Wynne, every four months.

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Alternating Sub-Specialty Conference, third Wednesday, 12:00 noon, Second Floor Classroom
General Pediatrics Seminar, first and third Friday, 12:00 noon, Second Floor Classroom
Genetics Conference, each Wednesday, 12:00 noon, Sturgis Building, Room 457
Infectious Disease Conference, second Wednesday, 12:00 noon, Sturgis Building, Room 121
Oncology Conference, third Thursday, 8:00 a.m., Second Floor Classroom
Pediatric Grand Rounds, each Tuesday, 8:00 a.m., Sturgis Building, Auditorium
Pediatric Neuropsychiatry Conference, second Wednesday, 1:30 p.m., Polly R. Thomas Conference Room
Pediatric Neuroscience Conference, first Thursday, 8:00 a.m., Second Floor Classroom
Pediatric Pathology Conference, first Wednesday, 12:00 noon, Second Floor Classroom
Pediatric Pharmacology Conference, fifth Wednesday when applicable, 12:00 noon, Second Floor Classroom
Pediatric Radiology Conference, first and third Thursday, 12:00 noon, Second Floor Classroom
Pediatric Research Conference, third Monday, 12:00 noon, Second Floor Classroom
Problem Case Conference, second and fourth Friday, 12:00 noon, Second Floor Classroom

LITTLE ROCK-ST. VINCENT INFIRMARY

Cancer Conference, first Wednesday, 12:00 noon, CARTI Auditorium. A meal is provided.
Cancer Conference, third and fourth Thursday, 12:00 noon, Room S1174K, Lab. A meal is provided.
General Medicine Journal Club, each Tuesday, 12:00 noon, Medical Affairs Conference Room. Bring your lunch.
Hematology-Oncology Conference, second Thursday, 12:00 noon, Laboratory Library. A meal is provided.
Interhospital Urology Grand Rounds, first Tuesday, 5:30 p.m., Maumelle Room. Refreshments are provided.
Neuropathology Conference, third Tuesday, 5:00 p.m., Room S1174K, Laboratory. Refreshments are provided.
Pediatric Conference, first Tuesday, 12:30 p.m., Maumelle Room. A meal is provided.
Peripheral Vascular Disease Conference, third Tuesday, 6:00 p.m., Maumelle Room. A meal is provided.
Pulmonary Conference, second and fourth Wednesday, 12:00 noon, DeSoto Room. A meal is provided.

LITTLE ROCK-UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

ACRC/CARTI Tumor Conference, each Wednesday, 12:00 noon, CARTI, Markham & University
ACRC Oncology Forum, fourth Thursday, 4:00 p.m., UAMS Education Building, Room G137
Anesthesia Conference Series, each Wednesday, 4:00 p.m., UAMS Education Building, Room G/110 A&B
Anesthesia Lecture Series, each Wednesday and Thursday, 4:00 p.m., UAMS Education Building, Room G/110 A&B
Anesthesia Morbidity and Mortality Conference, each Tuesday, 6:45 a.m. (Wednesday afternoon only during last week of the month at 4:00 p.m.), UAMS Education Building, Room G/110 A&B
Interdisciplinary Gynecologic Cancer Conference, each Friday, 12:30 p.m., UAMS Education Building, Room G106 A&B
Medicine Grand Rounds, each Thursday, 12:15 p.m., UAMS Shorey Auditorium.
Medicine Research Conference, each Tuesday, 8:00 a.m., UAMS Shorey Building Room 8/105
Neurology Clinical Case Conference, three Thursdays per month, 8:00 a.m. Rotates between UAMS (7D33) and LRVAMC (3S) and ACH.
Neuropathology Conference, every Tuesday, 4:00 p.m. Rotates between UAMS (Shorey Building, 4th floor) and LRVAMC (Autopsy Room).
Neuroscience Conference (Basic), second, third, and fourth Monday, 8:00 a.m., UAMS 7D33.

Ophthalmology Grand Rounds, each Wednesday, 7:30 a.m., UAMS Education Building, Room G/131B
Ophthalmology Problem Case Conference, each Thursday, 4:00 p.m., UAMS AAC Eye Clinic, Room 3/150.
Orthopaedic Bibliography Conference, each Tuesday, 8:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Fracture Conference, each Tuesday, 7:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Grand Rounds, each Tuesday, 10:00 a.m., UAMS Education Building, Room B/135
Psychiatry Grand Rounds, each Friday, 11:00 a.m., UAMS Shorey Auditorium
St. Vincent Urology Grand Rounds, first Tuesday, 5:30 p.m., St. Vincent Infirmary, Education Building Room 159
Surgery Grand Rounds, each Monday, 5:00 p.m., UAMS Education Building, Room G/141A
Surgery Morbidity and Mortality Conference, each Wednesday, 5:00 p.m., UAMS Education Building, Room G/131A.
Surgery Review Conference, each Monday, 6:00 p.m., UAMS Education Building, Room G/141A
Urologic Topics (Resident Presentation), once or twice monthly, 5:00 p.m., UAMS
Urology Grand Rounds, twice monthly, 5:00 p.m., VAMC
Urology Morbidity and Mortality Workshop, last Wednesday, UAMS
Uro-Radiology Workshop (Urologic Imaging), first Thursday, 5:00 p.m., UAMS
VA Medical Service Teaching Conference, each Thursday, 8:00 a.m., VAMC, Room 2D109
VA Physical Medicine and Rehab Grand Rounds, fourth Friday, 11:00 a.m., NLRVA Building 89 Conference Room or Arkansas Rehab Institute
VA Surgery Grand Rounds, each Thursday, 12:45 p.m., VAMC, Room 2D109
VA Topics in Rehabilitation Medicine, each Thursday, 7:45 a.m., NLRVA Conference Room, Building 89L
VA Weekly Cancer Conference (Surgical Service), each Tuesday, 1:00 p.m., VAMC, Room 2D109

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, third Thursday, 7:00 a.m., Conference Room 1
Grand Rounds Conference, each Wednesday, 12:00 noon, Conference Room 1. Lectures and Case Presentations. A light lunch will be served
Pathology Conference, third Tuesday, 3:00 p.m., Pathology Library. Case Presentations.
Pulmonary Conference, each Tuesday, 12:00 noon, Shuffield Auditorium. Lunch served for \$2.50.
Surgery Conference, each Thursday, 7:30 a.m., Shuffield Auditorium. Lectures and Case Presentations.

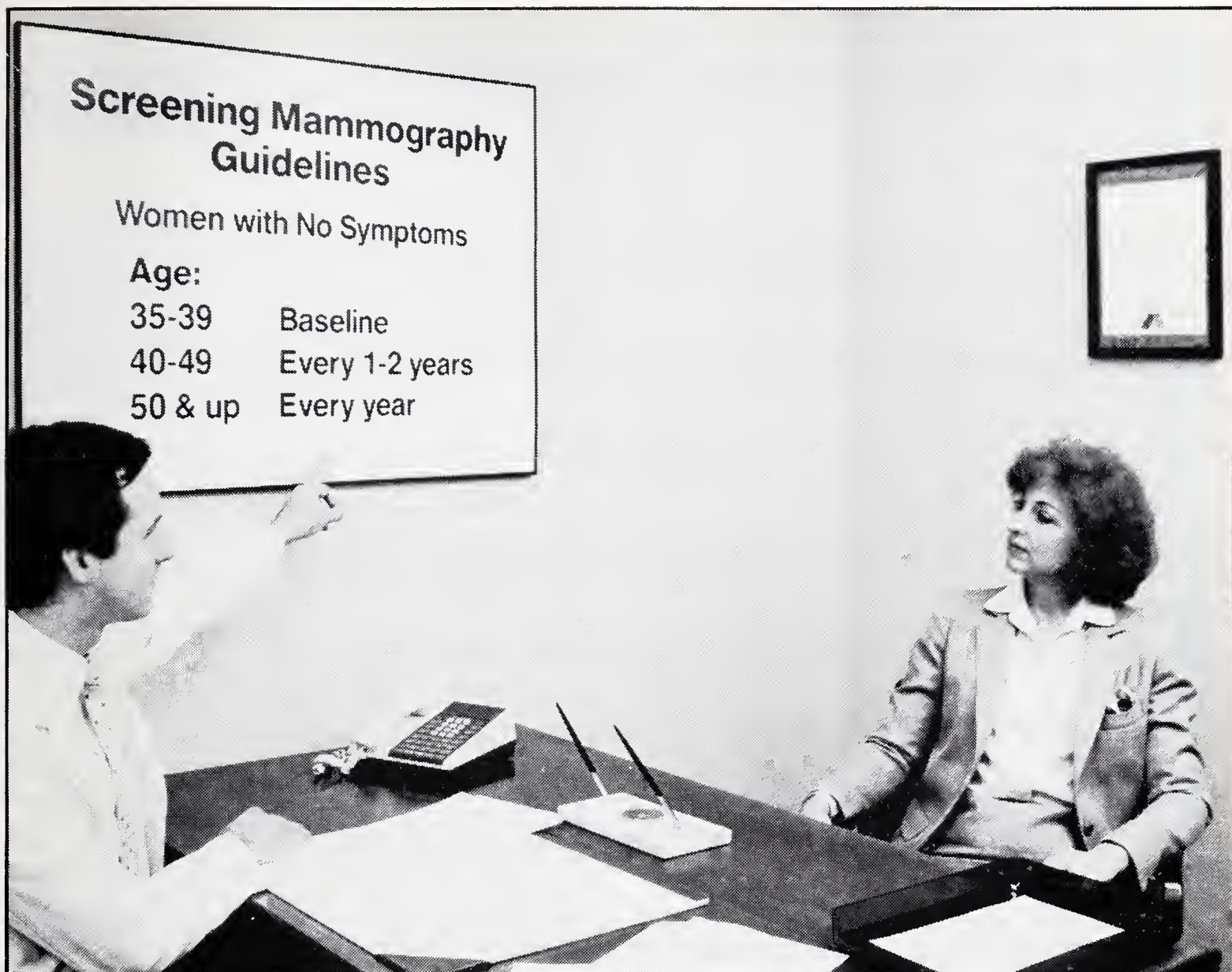
PINE BLUFF-AHEC

Behavioral Science Conference, each Thursday, 12:30 p.m., Jefferson Regional Medical Center
Chest Conference, second and fourth Friday, 12:30 p.m., Jefferson Regional Medical Center
Family Practice Conference, fourth Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Internal Medicine Conference, second and fourth Wednesday, 12:30 p.m., Jefferson Regional Medical Center
Obstetrics/Gynecology Conference, second Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Pediatric Conference, third Wednesday, 12:30 p.m., Jefferson Regional Medical Center
Radiology Conference, third Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Southeast Arkansas Medical Lecture Series, third Tuesday, 6:30 p.m., Rosswood County Club. Dinner meeting.
Sub-Specialty Conference, first Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Surgery Conference, first Wednesday, 12:30 p.m., Jefferson Regional Medical Center

TEXARKANA-AHEC

Chest Conference, third Wednesday, 12:30 p.m., St. Michael Hospital
Tumor Conference, first Wednesday, 7:00 a.m., St. Michael Hospital

As organizations accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the organizations named certify that these continuing medical education activities meet the criteria for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.



Screening Mammography Guidelines

Women with No Symptoms

Age:

35-39	Baseline
40-49	Every 1-2 years
50 & up	Every year

What will you tell her about screening mammography?

Many of your patients will hear about screening mammography through a program launched by the American Cancer Society and the American College of Radiology, and they may come to you with questions. What will you tell them?

We hope you'll encourage them to have a screening mammogram, because that, along with

your regular breast examinations and their monthly self examinations, offers the best chance of early detection of breast cancer, a disease which will strike one woman in 10.

If you have questions about breast cancer detection for asymptomatic women, please contact us.



Professional Education Dept.
National Headquarters
90 Park Avenue
New York, New York 10016
or your local society



American
College of
Radiology

1891 Preston White Drive
Reston, Virginia 22091
(703) 648-8900

MEDICINE IN THE NEWS

IT'S ORDER TIME FOR CPT-88

Physicians can now place their orders for AMA's 1988 volume of CPT which will be available in December. Copies are \$24.00 each for AMA members and \$30.00 for all others. Orders, noting the publication's code number, OP-341/8, should be directed to: Book & Pamphlet Fulfillment, AMA, Post Office Box 10946, Chicago, IL 60610-0946.

Orders being charged either to MasterCard or VISA also may be placed by calling AMA's tollfree number, 1-800-621-8335. Those who order CPT-1988 will also be given their choice of one of eight companion minibook listing codes for procedures performed in specialty fields. Order forms may be obtained from American Medical News or AMA specialty journals where promotional notices will be appearing.

AVOIDING AND RESOLVING MEDICARE PROBLEMS

Understanding the Medicare Program's claims processing system and dealing with carrier or claims-related problems is one of the most serious administrative challenges facing medical practice today. To assist physicians and their office staff in meeting this challenge effectively, the American Society of Internal Medicine (ASIM) has published "Unraveling Medicare Red Tape: How to Avoid and Resolve Claims and Reimbursement Problems." The latest in a series of 13 ASIM practice management guides designed to help internists with the business side of medical practice, the book offers step-by-step instructions for resolving problems due to claims processing errors; expediting delayed claim determinations or payments; and appealing unsatisfactory claim determinations.

The guide explains how to avoid "medically unnecessary" claim judgments; what the most common causes of unsatisfactory claims determinations are; information needed to resolve claims difficulties; and how to schedule a fair hearing. Supporting the text are a number of tables and process diagrams useful in understanding and overcoming common Medicare claim problems.

The book is available from ASIM Literature Order Dept. RTNR, 1101 Vermont Avenue, NW, Suite 500, Washington DC 20005. Single issues, \$2.00; bulk order of 50 or more, \$1.50 per copy; 100 or more, \$1.00 per copy.

FACTS ABOUT FAMILY PRACTICE

A new publication containing comprehensive data on family practice is available from the American Academy of Family Physicians. The reference guide presents current statistics, tables, graphs, and charts which answers many of the questions concerning family practice.

The publication can be ordered for \$5.00 for AAFP members and \$10.00 for nonmembers. Orders or further information can be obtained from: Information Services Department (ISD), American Academy of Family Physicians, Post Office Box 8723, Kansas City, MO, 64114; 1-(800) 821-2512.

WHY AAMA?

by Ken Lamastus, CAE
Arkansas Medical Society

Some years ago, the Arkansas Medical Society was of assistance in organizing the Arkansas chapter of the AAMA, and the Society has continued to provide assistance for one very important reason: the Medical Assistants organization has upgraded the skills and capabilities of those working in the offices of Arkansas Medical Society members. In my tenure at the Society, I have grown to respect the work of the Arkansas Chapter of the AAMA. Their efforts are apparent in my dealings with physicians, their offices, and other groups who come in contact with physicians' office personnel.

Recently, I was meeting with a representative of a major insurance carrier in Arkansas. The AAMA came up in conversation, particularly Certified Medical Assistants. The representative told me that it is apparent which physicians had CMA or AAMA members on their staff because there seldom were insurance claim problems. He felt that the CMA programs and the AAMA were doing an excellent job training physicians' office personnel in the area of insurance claims and problems.

The AAMA chapters across the country are extremely important as they are the only organization dedicated to improving the skills of those working in physicians' offices. The AAMA provides the vehicle by which physicians' office staff can attain recognition and deliver more efficient, productive, quality services to their patients. The Arkansas Medical Society has long supported educational aspirations, not only for physicians, but for the entire health care team, including office personnel.

NEWSMAKERS

Dr. Mae Nettleship, director of the Washington Regional Medical Center and ANL Medical Laboratory in Fayetteville, was named as the first women Rotarian in the state of Arkansas. **Dr. J. D. McDonald**, president of the Fayetteville club, said that Dr. Nettleship was voted to membership unanimously by the Rotary board members.

Seventy-seven medical medical students and health care professionals attended an AIDS seminar at the University of Arkansas for Medical Sciences campus recently. The seminar was sponsored by the Arkansas Medical Society Medical Student Section. **Dr. William N. Jones**, Chairman of the AMS Special Committee on AIDS, spoke about the history of the disease, the current problems being faced by society and the latest statistics and developments. A question and answer session followed.

Two Arkansas physicians were recently named as Fellows of the American College of Radiology. **Dr. Calvin R. Cassady**, from Fort Smith and **Dr. Murray T. Harris**, of Fayetteville, received the honor at the annual meeting of the American College of Radiology in San Diego, California.

Herbert B. Wren, M.D., a Texarkana surgeon, has been selected to direct the Area Health Education Center (AHEC) at Texarkana. Dr. Wren fills the position held by **Dr. James B. Kittrell** who retired as director last month.

Dr. Gary Barton, a resident member of the Arkansas Medical Society, won the door prize offered at the recent Physicians Opportunity Fair at the University of Arkansas for Medical Sciences campus. Dr. Barton received a dinner for two at Allouette's.

The American Board of Internal Medicine for Advanced Achievement in Internal Medicine recognized **Dr. David M. Johnson**, a Searcy internist, for having passed all three modules of the AAIM examination. Dr. Johnson's name will be added to the Directory of Certified Internists and the Directory of Medical Specialists.

Dr. Wade Burnside, a Fayetteville physician, has been appointed acting director of the Student Health Service

at the University of Arkansas, Fayetteville. Dr. Burnside has been practicing in Fayetteville for 28 years.

The small Poinsett County town of Weiner has a new doctor in **Dong Nguyen, M.D.** The Weiner Chamber of Commerce has been working for some time to place a physician in town. Dr. Nguyen will maintain his practice in Trumann.

Dr. Sanford Hutson of Paris has been recently elected to the board of directors of the Arkansas Academy of Family Physicians.

The Arkansas Caduceus Club's new vice president is **Dr. Robert Chester**. Dr. Chester, a Pine Bluff urologist, has held the position of president and past president prior to being elected to his current position.

James L. Maupin, M.D., has rejoined the Dardanelle Clinic. Dr. Maupin, a family practitioner, had been the executive vice president of the Peer Review and Quality Assurance Organization for Arkansas.

Dr. A. H. "Buck" Rusher, a Jonesboro surgeon and **Dr. Ron Simpson**, a third year family practice resident in Jonesboro, recently spent six weeks in Zimbabwe. They worked in the Sanyati Baptist Hospital, giving the regular missionary doctor some vacation time. The families of both physicians accompanied them on the trip and performed various missionary duties including nutrition and sanitation classes for the women in the area.

Carlton L. Chambers, III, M.D. recently was named a Fellow of the American Academy of Facial Plastic Surgery and Reconstructive Surgery. Dr. Chambers practices in Harrison with his wife, Dr. Susan Chambers, a pediatrician.

The University of Arkansas at Little Rock Alumni Association has elected **Jerry Carter, M.D.** to its board of directors. Dr. Carter is a Little Rock family practitioner.

J. Hosea Young, M.D., a Wynne family practitioner, was recently named the Unit Medical Volunteer of the Year for the American Cancer Society. Dr. Young is the Professional education chairman of the Cross County Unit.

NEW MEMBERS

BAXTER COUNTY MEDICAL SOCIETY

Rigler, Wilson F., Family Practice, Mountain Home. Born February 3, 1942, Iowa. Pre-medical education, Iowa State University, B.S. Medical education, University of Iowa, Iowa City, 1969. Internship, Tripler Army Medical Center, Honolulu, Hawaii. Military record, U.S. Army 1968-1977. Practice experience, Pittsburg, KS, 7 years; Burlington, KS, 1 year; Mountain Home, AR, 2 years.

BENTON COUNTY MEDICAL SOCIETY

Dang, Minh-Tam, Neurology, Rogers. Born Saigon, Vietnam, March 13, 1937. Pre-medical education, Saigon University, Vietnam. Medical education, Saigon University, Vietnam. Internship/residency, University of Arkansas for Medical Sciences. Military record, South Vietnam Army. Member, American Academy of Neurology.

Goss, Stephen L., Internal Medicine/Pediatrics, Bentonville. Born November 30, 1956, Pine Bluff. Pre-medical education, Ouachita Baptist University, B.S., 1977. Medical education, University of Arkansas for Medical Sciences, 1983. Internship/residency, UAMS. Board eligible. Member, American College of Physicians, American Academy of Pediatrics.

McCollum, William E., Family Practice, Decatur. Born March 7, 1956, Little Rock. Pre-medical education, Hendrix College, B.A., 1977. Medical education, University of Arkansas for Medical Sciences, 1983. Internship/residency, University of Oklahoma, Tulsa. Board certified.

Pappas, James J., Ob/Gyn, Rogers. Born May 7, 1955, Little Rock. Pre-medical education, Rhodes College, Memphis, TN, B.S., 1977. Medical education, University of Arkansas for Medical Sciences, 1981. Internship, Louisiana State University, Shreveport. Residency, Louisiana State University, New Orleans. Board eligible. Member, Junior Fellow, ACOG.

BOONE COUNTY MEDICAL SOCIETY

Ashford, Walter P., Internal Medicine, Harrison. Born December 6, 1941, Starkville, MS. Pre-medical education, Mississippi State University, B.S., 1962. Medical education, University of Mississippi School of Medicine, 1966. Internship/residency, University of Mississippi Medical Center Program, Jackson, MS.

Military record, U.S. Navy, 1967-1969. Practice experience, 15 years, Harrison, AR.

Jennings, Larry B., Family Practice, Marshall. Born November 3, 1949, Marshall. Pre-medical education, Harding College and University of Arkansas at Little Rock, B.S., 1970. Medical education, Des Moines College of Osteopath and Surgery, 1974. Internship, Tulane University, New Orleans, LA. Residency, University of Iowa program, Des Moines. Practice experience, 8 years, Marshall. Board certified. Member, AMA.

BRADLEY COUNTY MEDICAL SOCIETY

Wharton, Joe H., Family Practice, Warren. Born July 19, 1949, Little Rock. Pre-medical education, University of Arkansas, Monticello, B.S., 1972, and University of Southern Mississippi, Ph.D., 1977. Medical education, University of Arkansas for Medical Sciences, 1984. Internship, Louisiana State University program, Monroe. Residency, UAMS program, AHEC-South Arkansas, El Dorado. Board eligible. Member, AMA, AAFP.

COLUMBIA COUNTY MEDICAL SOCIETY

Antoon, Patrick D., Family Practice, Magnolia. Born Magnolia. Pre-medical education, University of Arkansas at Little Rock, B.S., 1978. Medical education, Universidad Autonoma de Guadalajara, Mexico, 1982. Internship/Residency, UAMS.

GARLAND COUNTY MEDICAL SOCIETY

Smith, John W., Internal Medicine/Nephrology, Hot Springs. Born August 13, 1955, Pine Bluff. Pre-medical education, Northeast Louisiana University, B.S., 1977. Medical education, University of Arkansas for Medical Sciences, 1981. Internship/residency/fellowship, UAMS. Board certified. Member, International Society of Nephrology.

GREENE COUNTY MEDICAL SOCIETY

Smith, Mark McCollough, General Practice, Monette. Born June 8, 1956, Little Rock. Pre-medical education, Hendrix College, B.A., 1978. Medical education, University of Arkansas for Medical Sciences, 1978. Internship, University of Tennessee, Memphis. Practice experience, 3 years, Monette, AR.

INDEPENDENCE COUNTY MEDICAL SOCIETY

O'Brien, Marcus D., Pediatrics, Batesville. Born February 4, 1958, Jonesboro. Pre-medical education, University of Arkansas, Fayetteville, B.A. 1980. Medical education, University of Arkansas for Medical Sciences, 1984. Internship/residency, UAMS. Member, American Academy of Pediatrics.

PULASKI COUNTY MEDICAL SOCIETY

Abraham, Robert E., Neurological Surgery, Little Rock. Born March 23, 1951, Little Rock. Pre-medical education, United State Air Force Academy, Colorado Springs, CO, 1977. Medical education, University of Arkansas for Medical Sciences. Internship, Wilford Hall USAF Medical Center Program. Residency, University of Texas, San Antonio. Practice experience, Chief of Neurosurgery, Keesler AFB, Biloxi, MS, 3 years. Board certified, American Board of Neurological Surgery (Diplomate).

Barger, Denver L., Family Practice, Little Rock. Born November 26, 1951, Searcy. Pre-medical education, University of Central Arkansas, Conway, B.S., 1977. Medical education, University of Arkansas for Medical Sciences, 1984. Residency, UAMS. Board eligible.

Elders, M. Joycelyn, Pediatric Endocrinology, Little Rock. Born August 13, 1933, Schall, AR. Pre-medical education, Philander Smith College, B.A., 1952. Medical education, University of Arkansas for Medical Sciences, 1960. Internship, University of Minnesota Hospital. Residency, UAMS. Board certified.

Farque, Greg L., Family Practice, College Station. Born August 16, 1950, Crossett. Pre-medical education, Louisiana Tech University, Ruston, LA, B.S., 1972. Medical education, University of Arkansas for Medical Sciences, 1984. Internship/residency, UAMS.

Jones, Gail R., Urology, Little Rock. Born July 17, 1952, New York. Pre-medical education, Hunter College of the City University of New York, B.S., 1975. Medical education, MeHarry Medical College, Nashville, TN, 1981. Internship, Hubbard Hospital, Nashville, TN. Residencies, Hubbard Hospital, Nashville, TN and University of Pittsburgh, Pittsburg, PA.

Knowles, Stanley C., Gastroenterology, North Little Rock. Born July 23, 1954, Fort Worth, TX. Pre-medical education, University of Texas, Arlington, B.S, 1976. Medical education, University of Texas Health Sciences Center, 1980. Internship/residency, University of Texas at San Antonio program. Practice experience, Texarkana, AR, 2 years. Board certified.

LeNarz, LeRoy A., Cardiovascular Surgery, Little Rock. Born June 8, 1950, Warren. Pre-medical education, Hendrix College. Medical education, University of Arkansas for Medical Sciences, 1976. Internship, UAMS. Residency, University of Texas Southwestern Medical

Program, Dallas. Practice experience, Tyler, TX, 1 year; Dallas, 2 years. Board certified, American Board of Surgery, American Board of Thoracic Surgery. Member, Smith County Medical Society, Texas.

Osteen, Paul, Surgery, Little Rock. Born November, 1955, Texas. Pre-medical education, Oral Robert University, Tulsa. Medical education, ORU College of Medicine, 1983. Internship/residency, UAMS. Board eligible.

Selby, John H. Jr., Thoracic and Cardiovascular Surgery, Little Rock. Born August 17, 1943, Boston, MA. Pre-medical education, Dartmouth College, Hanover, NH, 1963. Medical education, University of Texas Southwestern, Dallas, TX, 1969. Internship, Boston University Program, Boston, MA. Residency, University of Texas Southwestern Medical Program, Dallas. Fellowship, University of Mississippi Medical Center, Jackson. Practice experience, Little Rock; Colorado Springs, CO; University of Florida School of Medicine, Gainesville. Board certified, American Board of Surgery, American Board of Thoracic Surgery.

White, Rowena R., Psychiatry, Little Rock. Born March 5, 1944, Napa, CA. Pre-medical education, Mississippi College, Clinton, MS., B.S., 1966. Medical education, University of Mississippi, Jackson, 1970. Residency, University of Florida School of Medicine and University of Arkansas for Medical Sciences. Practice experience, UAMS, 1 year as assistant professor; Shreveport, LA, 2 years.

ST. FRANCIS COUNTY MEDICAL SOCIETY

Schwartz, Frank R., Internal Medicine, Forrest City. Born February 14, 1951, Columbus, Ohio. Pre-medical education, Florida State University, B.S., 1973. Medical education, Florida State University, 1979. Internship/residency, University of Southern Alabama Medical Center, Mobile. Board certified. Member, ACP.

WASHINGTON COUNTY MEDICAL SOCIETY

Atwood, H. Daniel, Plastic and Reconstructive Surgery, Fayetteville. Born November 12, 1951, McComb, MS. Pre-medical education, United State Air Force Academy, Colorado Springs, B.S., 1973. Medical Education, University of Mississippi School of Medicine, 1977. Internship/residency, USAF Medical Center, Keesler, MS. Military Service, USAF, 1977 to present. Practice experience, USAF Hospital, Lajes, New York, 1 year; David Grant USAF Medical Center, California, 2 years. Board eligible. Member, American College of Surgeons, Air Force Society of Clinical Surgeons.

Burlingame, Robert K., Fayetteville. Born July 26. Pre-medical education, University of Missouri, B.A. Medical education, University of Nebraska, 1982.

Hudson, Loyde H., Thoracic and Cardiovascular Surgery, Yellville. Born June 27, 1923, Bruno, AR. Pre-medical education, University of Arkansas, Fayetteville, B.S., B.S.A., 1948. Medical education, University of Arkansas for Medical Sciences, 1952. Internship, Philadelphia General Hospital. Residencies, University of Arkansas for Medical Sciences; Washington University, St. Louis, MO; Baylor University, Houston, TX. Military record, U.S. Army; U.S. Army reserves, U.S. Air Force Reserves; Medical Corps. Practice experience, Amarillo, TX, 1961-70; Flint, MI, 1971-85; Yellville, AR 1985-87. Member, FACS, FACC, Society of Thoracic Surgery, FACCP.

Resident Members

Abraham, James H., Medicine. Born May 2, 1960, Little Rock. Pre-medical education, University of Arkansas, Fayetteville, B.A., 1982. Medical education, UAMS, 1987. Internship, UAMS.

Brookover, Wesley T., Urology. Born January 1, 1961, Tulsa, OK. Pre-medical education, Oklahoma State University, Stillwater, 1983. Medical education, Oklahoma University, 1987. Internship, UAMS.

Bui, Lai Tien. Born Saigon, Vietnam. Pre-medical education, University of Paris VII, Paris, France. Medical education, University of Paris VII, 1985.

Falwell, K. Wade, Family Practice. Born March 9, 1957, Bradford, AR. Pre-medical education, Arkansas State University, M.A. 1983. Medical education, UAMS, 1987. Residency, AHEC - Pine Bluff.

Gibbs, Rachel L., Ob/Gyn. Born March 26, 1959, Bentonville, AR. Pre-medical education, Oklahoma Baptist University, Shawnee, OK, B.S., 1981. Medical education, University of Oklahoma, Oklahoma City, 1987.

Hale, Kevin D., Family Practice. Born March 6, 1961, Badkreuznach, West Germany. Pre-medical education, Henderson State University, B.S., 1983. Medical education, UAMS, 1987. Residency, AHEC - Pine Bluff.

Hilman, Michael G., Family Practice. Born April 22, 1960, Batesville, AR. Pre-medical education, Hendrix College, B.A., 1983. Medical education, UAMS, 1987. Residency, AHEC - Pine Bluff.

Kassam, Mary-Jane B., Family Medicine. Born April 18, 1953, New Jersey. Pre-medical education, Georgetown University, Washington, D.C.; and University of Arkansas at Little Rock, B.S. 1977. Medical education, UAMS, 1987.

Landry, Stuart Gerard. Born May 25, 1961, Lake Charles, LA. Pre-medical education, McNeese State University, Lake Charles, B.S. 1983. Medical education, Louisiana State University, New Orleans, 1987. Internship, UAMS.

Merkouris, Rhene W., Ob/Gyn. Born November 26, 1959, Grass Valley, CA. Pre-medical education, University of California, Davis, B.S., 1983. Medical education, University of California, San Francisco, 1987.

Morrison, Jimmy J., Internal Medicine. Born September 21, 1960, Malvern, AR. Pre-medical education, Louisiana State University, Shreveport, B.S., 1984. Medical education, LSU Shreveport, 1985. Internship, UAMS.

Moseley, Brad L., Family Practice. Born March 19, 1963, Albuquerque, NM. Pre-medical education, University of Kansas City, B.A., 1981. Medical education, University of Missouri, Kansas City, 1987. Residency, AHEC - Pine Bluff.

Sankey, Felicia Denise. Born February 24, 1960, Dayton, Ohio. Pre-medical education, Centenary College of Medicine, Shreveport, LA, B.S., 1982. Medical education, Louisiana State University, Shreveport, 1987. Internship, UAMS.

Schrader, Nancy L., Emergency Medicine. Born February 3, 1955, Memphis, TN. Pre-medical education, Memphis State University. Medical education, University of Tennessee, Memphis, 1987.

Sertich, Chris M., Transitional. Born December 8, 1960, San Antonio, TX. Pre-medical education, St. Marys University, San Antonio, 1983. Medical education, University of Texas, San Antonio, 1987.

Stanton, T. Michael, General Surgery. Born July 16, 1955, Conway, AR. Pre-medical education, University of Arkansas, Fayetteville, B.S., 1977. Medical education, UAMS, 1985.

Studdard, Daniel M., Family Practice. Born February 6, 1955, Pine Bluff. Pre-medical education, UAMS College of Health Related Professions, A.S., 1979 and Ouachita Baptist University, B.S., 1978. Medical education, Oklahoma College of Osteopathic Medicine & Surgery, 1986. Internship, Oklahoma Osteopathic Hospital, Tulsa. Residency, AHEC - Pine Bluff.

Tapley, Thomas S., Pathology. Born June 2, 1953, Kennett, MO. Pre-medical education, University of Mississippi, Oxford, B.S., 1974. Medical education, University of Mississippi, 1978. Internship, LSU.

Tracy, Wallace L., Family Practice. Born January 21, 1955, Little Rock. Pre-medical education, Arkansas State University, B.S., 1981. Medical education, UAMS, 1987. Residency, AHEC - Pine Bluff.

Walker, Jr., Meredith M., Internal Medicine. Born January 4, 1959, Memphis, TN. Pre-medical education, University of Mississippi, B.S., 1981. Medical education, University of Mississippi, Jackson, 1987. Internship, UAMS.

Walsh, Ruth, Transitional. Born February 27, 1961, Bethlehem, PA. Pre-medical education, University of Oklahoma, Norman, B.S., 1983. Medical education, University of Oklahoma, Oklahoma City, 1987. Internship, UAMS.

Williams, Paul E., Internal Medicine. Born November 15, 1960, Searcy, AR. Pre-medical education, Ouachita Baptist University, B.S., 1983. Medical school, UAMS, 1987. Internship, UAMS.

IN MEMORIAM

DR. CHARLES GARRISON CLARK

Charles Garrison Clark, M.D., a retired general practitioner, died September 27, 1987 in Arkadelphia. He was 65.

Dr. Clark was a graduate of the University of Arkansas for Medical Sciences. He was an Emeritus member of the Arkansas Medical Society, having been a member for 38 years. He was a World War II Army veteran, a former president of the Arkadelphia Chamber of Commerce as well as being a Rotarian and a Boy Scout volunteer.

Dr. Clark is survived by his wife, Mary Ella Clark; three daughters, Peggy Clark of Hot Springs, Mrs. Tim Tennyson of El Dorado and Mrs. Tim Bozik of New York City; a sister, Mrs. Sam Jameson of Hot Springs and two grandchildren.

DR. HERBERT LANFORD

Dr. Herbert Lanford, aged 64, of West Memphis, a general surgeon, died Thursday, October 8, 1987.

Dr. Lanford was a member of the Arkansas Medical Society for 27 years. He was a World War II veteran and a Presbyterian.

Dr. Lanford is survived by his wife, Doris Lanford; a son, Gregory B. Lanford of Nashville, TN; three daughters,

Nancy Bishop of Little Rock, Jan Irby of West Memphis, and Beverly Rich of Palatine, IL; his mother, Maude Lanford and brother, Howard C. Lanford of Midland, TX; and six grandchildren.

DR. GLENN GEORGE HAIRSTON

Dr. Glenn George Hairston, a retired Prescott general practitioner, died October 16, 1987. He was 79.

Dr. Hairston was a graduate of the University of Arkansas for Medical Sciences. He was a member of the AMA as well as a past president of the Nevada County Medical Society. Dr. Hairston, a former chief of staff at Nevada County Hospital, was a life member of the Arkansas Medical Society. He had been a member of the Society since 1943.

Dr. Hairston was a charter member of the Kiwanis Club, a past board member of the Bank of Prescott, a board member of the Chamber of Commerce and a member of the American Legion.

Dr. Hairston is survived by his wife, Max Garland Hairston; a son, James Hairston, an Army serviceman in Germany; a daughter, Mrs. Ruth Cummings of Texarkana; a stepdaughter, Mrs. Jane Kizziar of Little Rock and four grandchildren.

RESOLUTIONS

DR. FRANK MORGAN

WHEREAS, Dr. Frank Morgan passed away on Sunday, September 6, 1987, and

WHEREAS, Dr. Morgan was a senior partner in the professional association of Drs. Morgan & Church at North Little Rock, where he practiced Obstetrics and Gynecology, beginning in 1960, with skill and compassion to the benefit of thousands of patients and their families, and

WHEREAS, Dr. Morgan was a loyal son of the College of Medicine at the University of Arkansas for Medical Sciences, from which he graduated in 1953, and to which he returned many years of dedicated service, and

WHEREAS, he served on the UAMS Alumni Advisory Council and its committees with enthusiasm and affection, and

WHEREAS, Dr. Morgan was President of the Arkansas Caduceus Club in 1985-1986, on whose Board and committees he served with leadership and distinction

for many years, contributing greatly to its growth and effectiveness, and

WHEREAS, Dr. Morgan was a man of vision, gentle determination, good humor and a loving spirit, and whose many contributions as physician, role model, educator and loyal alumnus, have been greatly valued by his alma mater and by the people of Arkansas; now therefore be it

RESOLVED, by the Board of Trustees of the Arkansas Caduceus Club that the Board expresses its deep appreciation for Dr. Morgan's countless services and contributions, and extends condolences to his wife and family; and be it further

RESOLVED, that the Board direct that this Resolution shall be spread upon the minutes of the meeting, with copies to be provided to members of Dr. Morgan's family.

Unanimously adopted by the Board of Trustees of the Arkansas Caduceus Club, September 26, 1987.



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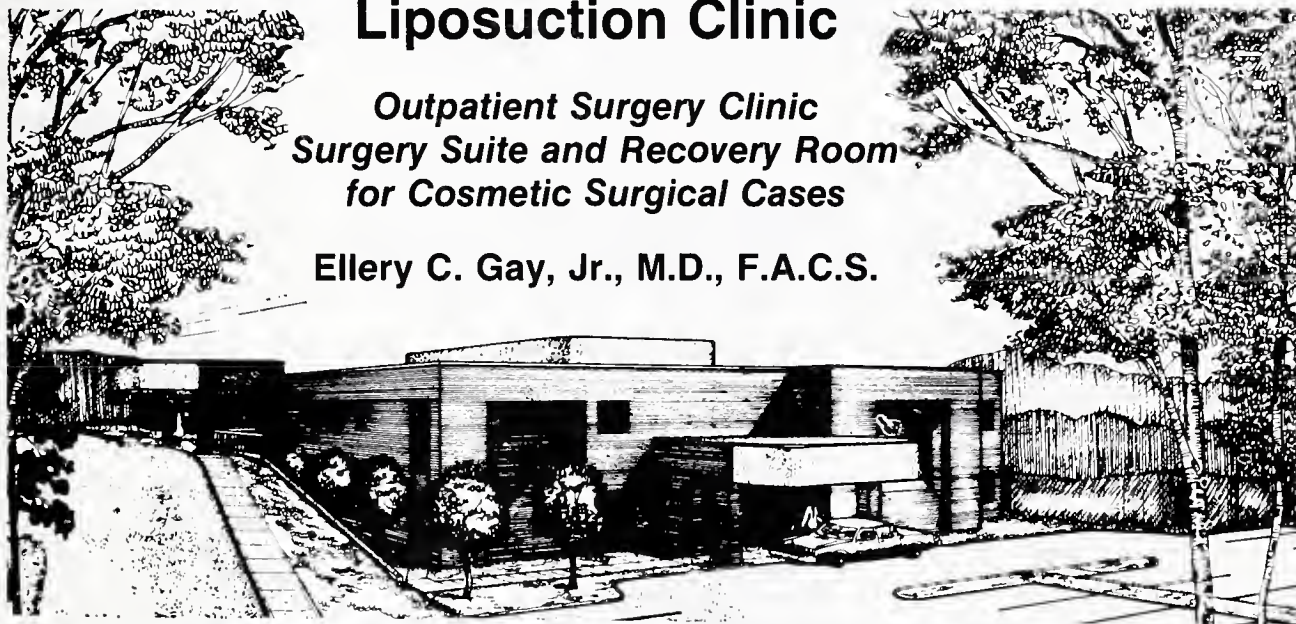
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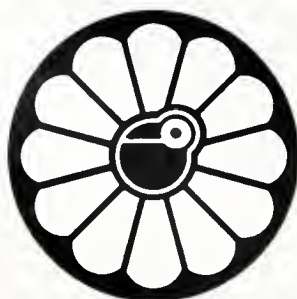
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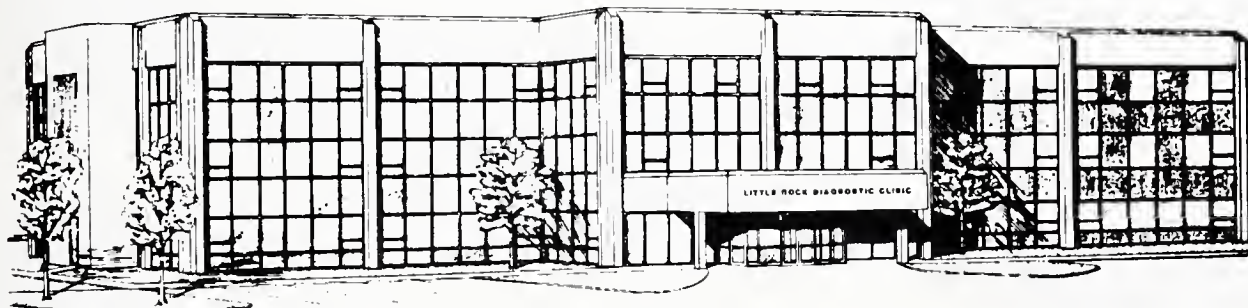
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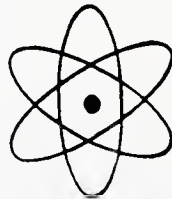
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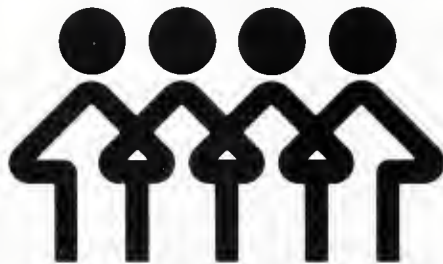
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Prevention of hypokalemia requires particular attention in patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis and ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, certain diarrheal states, or other states where hypokalemia is thought to represent particular added risk to the patient.

In patients with hepatic cirrhosis and ascites, sudden alterations of electrolyte balance may precipitate hepatic encephalopathy and coma. Treatment in such patients is best initiated in the hospital with small doses and careful monitoring of the patient's clinical status and electrolyte balance. Supplemental potassium and/or spironolactone may prevent hypokalemia and metabolic alkalosis in these patients. In cats, dogs and guinea pigs, Bumex has been shown to produce ototoxicity. Since Bumex is about 40 to 60 times as potent as furosemide, it is anticipated that blood levels necessary to produce ototoxicity will rarely be achieved. The potential for ototoxicity increases with intravenous therapy, especially at high doses.

Patients allergic to sulfonamides may show hypersensitivity to Bumex.

PRECAUTIONS: Measure serum potassium periodically and add potassium supplements or potassium-sparing diuretics, if necessary. Periodic determinations of other electrolytes are advised in patients treated with high doses or for prolonged periods, particularly in those on low salt diets.

Hyperurcemia may occur. Reversible elevations of the BUN and creatinine may occur, especially with dehydration and in patients with renal insufficiency. Bumex may increase urinary calcium excretion. Possibility of effect on glucose metabolism exists. Periodic determinations of blood sugar should be done, particularly in patients with diabetes or suspected latent diabetes.

Patients should be observed regularly for possible occurrence of blood dyscrasias, liver damage or idiosyncratic reactions.

Especially in presence of impaired renal function, use of parenterally administered Bumex should be avoided in patients to whom aminoglycoside antibiotics are also being given, except in life-threatening conditions.

Drugs with nephrotoxic potential and bumetanide should not be administered simultaneously. Since lithium reduces renal clearance and adds a high risk of lithium toxicity, it should not be given with diuretics.

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to you and yours
from the
ARKANSAS MEDICAL
SOCIETY STAFF

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AIDS in Arkansas

AMS Special Committee on AIDS

William N. Jones, M.D., Chairman

Update: December 1987 Self-Help for Seropositive Patients

Judith Vollmer, Ph.D., R.N.*

Introduction

The Arkansas Department of Health has awarded a grant to the Arkansas AIDS Foundation which will promote self-help groups for persons who have tested positive for HIV antibodies. Health professionals and other volunteers with counselling skills will be recruited to serve as information and counselling resources throughout the state. Training of support persons will be closely coordinated with related activities of the Arkansas Medical Society AIDS Committee, AHEC programs, and the AIDS/STD program of the Arkansas Department of Health.

The Arkansas Department of Health estimates that there are now several thousand carriers of the HIV virus in Arkansas. The work of keeping carriers healthy and self-supporting is an aspect of the AIDS epidemic which is less visible than education to prevent HIV spread or medical care for patients with opportunistic infections, but the potential economic benefits are enormous.

Status of HIV Positive Persons

The news of a positive test result is devastating to an individual. Some patients report being in a state of shock lasting for days or weeks as they realize they may eventually be debilitated by ARC or succumb to AIDS. The acceptance of the positive test result is just the first of a number of lifestyle adjustments that must be made if they are to protect themselves as well as others.

Whether individuals have been infected as a result of sexual activity, drug use or by transfusion, common stressful themes and issues can be expected.

Psychological Themes

Death fears and issues of loss and grief are in the mind of every seropositive individual. Gay men who have watched several friends of their own age die are especially reminded of their mortality. They are also fearful of abandonment, and of loss of control if they should become symptomatic. Although the actual rate of suicides among AIDS patients is surprisingly low, suicidal ideation is quite common. Self-blame, guilt and issues of identity frequently arise. Faith in God may be shaken and religious orientation may be disrupted. Moreover, the early appearance of neurological deficits may impair the ability of infected people to deal with problems.

Social Issues

Fear of disclosure and discrimination are pervasive, and with ample foundation. Seropositive persons have lost promotions, jobs, housing, insurance, medical care, educational opportunities and child custody when their test results became known. Men and women have been deserted by spouses, lovers, friends, relatives and churches when they most need a support system. Childbearing must be postponed or pregnancy terminated by infected women who are unwilling to risk perinatal infection of their babies. HIV carriers who are drug users are especially isolated from mainstream society.

Compounding the loss of community and loss of sources of sexual fulfillment is the drain on resources to pay for

*Project Coordinator for AIDS Education, Arkansas AIDS Foundation Education Project, 311 North Elm Street, Little Rock, Arkansas 72205; (501) 666-2442.

laboratory tests and drugs which are not covered by insurance. If the carrier is homosexual, he must deal with both covert and overt homophobia in his surroundings. If the carrier is a child, he may be denied an environment that fosters normal development.

Many of the above psychological and social problems are also experienced by family members, especially by the parents and siblings of gay men. In parts of the country where HIV/AIDS comprehensive care has been organized, family members often find much comfort by participating in volunteer activities, even after their own loved one has died. As the AIDS census increases in this state, affected families need to be assured of their place in the community.

Why Self-Help Groups?

Persons with common problems can be immensely helpful to one another in coping with fear, anger and depression, stress factors which can only further compromise the immune system. Self-help HIV/AIDS groups under the aegis of the AIDS Foundation in Little Rock provide models of experience which can be carried to other communities in Arkansas. By sharing experience, people are reassured that they are not alone. They find hope in learning that others have dealt successfully with the same problems they face. For those who need psychiatric help, a group facilitator can provide the strength to ask for such help. Gay and straight people often interact for the first time in these groups and find common ground. In these groups,

individual are restating life priorities, learning problem-solving and coping skills, and growing spiritually.

Training Facilitators for Self-Help Groups

Two-day workshops to train support group facilitators will be held in each AHEC area. Trainees will be sought from counselors, nurses, physicians, ministers, health educators and others with counselling skills. Training will include practice in dealing with attitudes about homosexuality and drug abuse; analysis of psychological, social, legal and medical problems of HIV positive persons; stress reduction; education and information of the public; how to start a self-help group; and how to network for community outreach in Arkansas. Workshop trainees will be provided with resource material and put in touch with local physicians who are members of the Arkansas Medical Society AIDS speakers bureau.

What Arkansas Physicians Can Do

Physicians interested in developing a support system for their own communities are asked to publicize the project, to recommend participants for workshops in their AHEC area or attend one of the workshops, which will be held in 1988. Physicians can contact their regional AHEC office in late December to obtain the workshop schedule, or call the Arkansas Health Department AIDS hotline 1-800-445-7720. Workshop schedules may also be obtained from the author at the address given on the opposite page.

Arkansas AIDS Statistics

from the Arkansas Department of Health

The number to the right of the totals indicate the amount of change since the publication of the figures in the November Journal. No change is indicated by (NC). It should be noted that the figures reported are **cases diagnosed in Arkansas only**. The figures do not include patients who were diagnosed in other states and have since moved to Arkansas.

Cases reported as of Nov. 16	88 (+7)
Deaths as of November 16	43 (+1)
Cases reported since January 1	48 (+7)

Cases by Sex

Male	83 (+7)	94%
Female	5 (NC)	6%

Cases by Risk Group

Homo/Bisexual*	71 (+5)	81%
IV Drug User	9 (+1)	10%
Hemophiliac	- (NC)	-
Transfusion	2 (NC)	2%
Heterosexual#	5 (+1)	6%
Unknown	1 (NC)	1%

Opportunistic Disease

Pneumocystic Carinii	46 (+4)	52%
Kaposi's Sarcoma	4 (NC)	4%
Pneumocystis Carinii and Kaposi's Sarcoma##	4 (+1)	4%
Other	34 (+2)	39%

Cases by Race

White	72 (+5)	82%
Black	15 (+2)	17%
Unknown	1 (NC)	1%

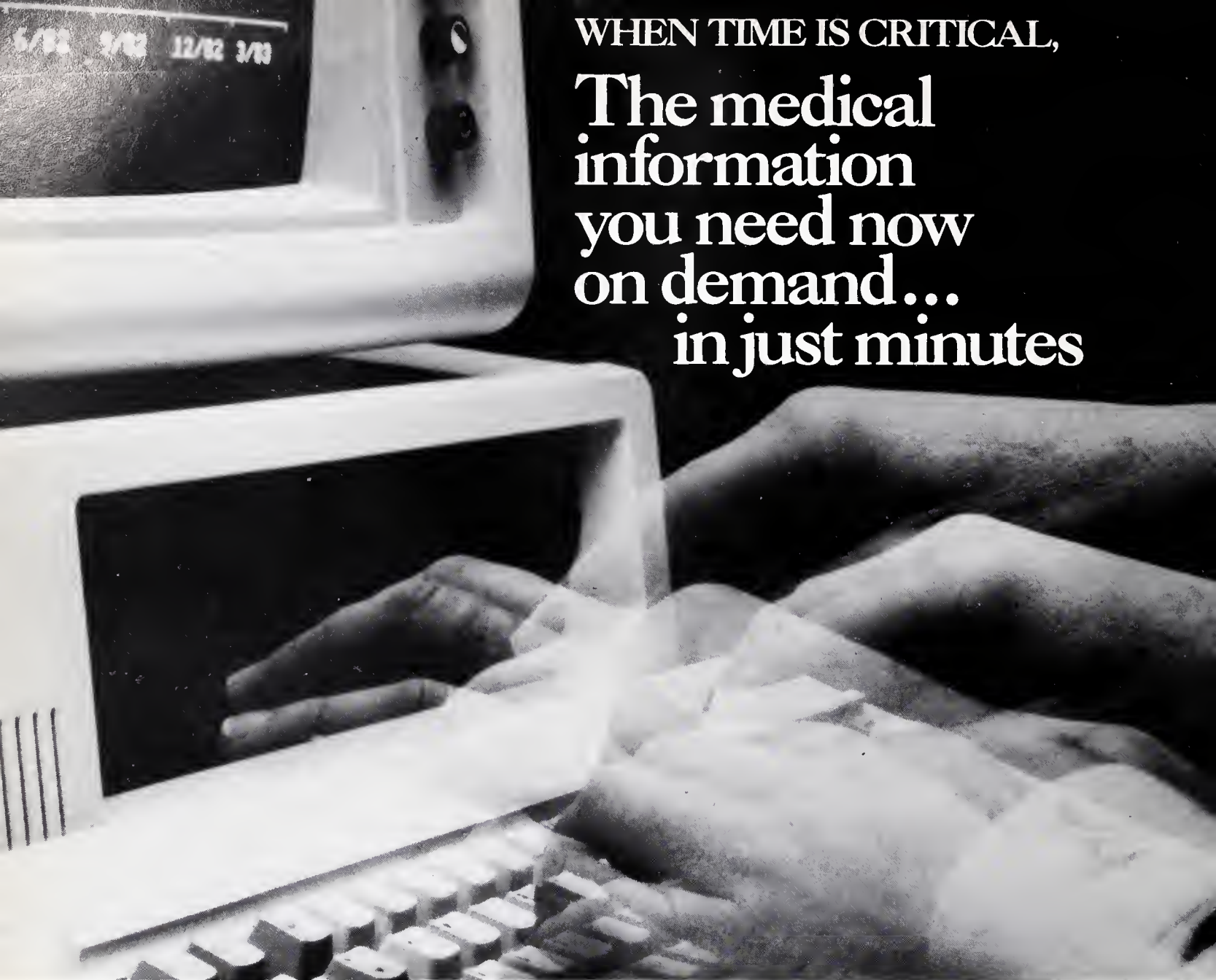
Cases by Age Group

Less than 20	- (NC)	-
20 - 29	32 (+3)	36%
30 - 39	36 (+3)	41%
40 - 49	15 (NC)	17%
50 - 59	3 (NC)	3%
60 or older	2 (+1)	2%

* Out of the 71 homosexual/bisexuals, 17 are/were IV drug users.

Out of the 5 heterosexuals, 2 are females with sex partners who are/were IV drug users, and 3 males with sex partners as prostitutes (1 also being an IV drug user).

The figures reported last month were in error. The correct figures for Pneumocystic Carinii and Kaposi's Sarcoma should have been: September 30th - 1; October 12th - 1; and October 21st - 3. Figures for the "Other" category were: September 30th - 30; October 12th - 30; and October 21st - 32



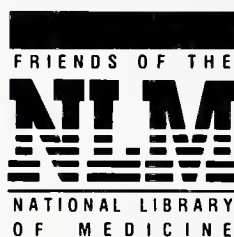
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“Legally Speaking”

RE: Physician Medical Records - Patient Access

Michael W. Mitchell, J.D.*



In the age where paternalistic attitudes such as concealing diagnoses from patients “for their own good” have given way to patient autonomy, the traditional reasons for withholding medical records appear to be in serious erosion. Some physicians take the view that there is therapeutic advantage to the patient’s reading their own records which increases understanding and reduces anxiety.

A number of inquiries have been received regarding patient access and physician disposition of physician medical records. This month’s and next month’s page of “Legally Speaking” will be devoted to these questions.

The historical approach to patient access to physician medical records has been physician control as to “what information is given to the patient, for the patient’s own good.”¹ Justification for withholding medical records includes: lack of patient understanding due to technical language;² patient might misinterpret and possibly even indulge in self-medication;³ adverse information in the medical record could be harmful to the patient (e. g. fatal diagnosis or diagnosis of malignant disease);⁴ record might reflect confidential statement by third persons.⁵ However, medical records may not be withheld solely because of an unpaid bill for medical services, although a reasonable copy charge may be requested as well as a charge for medical reports.⁶

The recent trend has been toward direct patient access. The AMA provides, to-wit:

Notes made in treating a patient are primarily for the physician’s own use and constitute his personal property. However, on request of the patient a physician should provide

* General Counsel to the Arkansas Medical Society, Mitchell and Roachell Law Firm, Post Office Box 1510, Little Rock, Arkansas 72203.

*a copy or a summary of the record to the patient or to another physician, an attorney or other person designated by the patient.*⁷

The American Hospital Association also recognizes the patient’s right to “complete and current information concerning his diagnosis, treatment and prognosis in terms the patient can reasonably be expected to understand.”⁸

Although there has been no legislative mandate in Arkansas, some states have granted the patient “...a direct right of access to his record by statute.”⁹ Even where there is no right of access by statute, courts readily grant access to physician’s medical records since the patient “...clearly has an interest in certain information contained in the record.”¹⁰ In recognizing the fiduciary qualities of the physician-patient relationship, courts often place a duty on the physician “...to reveal to the patient that which, in his best interests, he should know...”¹¹ Another court went even further still basing its decision on fiduciary principles, to-wit:

*It is our opinion that the fiducial qualities of the physician-patient relationship require the disclosure of medical data to the patient or his agent on request, and that the patient need not engage in legal proceedings to attain a loftier status in his quest for information.*¹²

In both Emmett, supra, and Connell, supra, the courts recognized hospital-physician ownership of the records and

neither would prevent refusing release of information deemed medically harmful to the patient. However, where there is no statutory right to access, courts may deny patient request to inspect and copy where the interest is not deemed legitimate.¹³ For example, a former mental patient was denied the right to copy her medical records to verify information desired for writing a book.¹⁴ Therefore, where there is no statutory right of access, as in Arkansas, the patient has no absolute right but must show a legitimate interest to require disclosure.

In the age where paternalistic attitudes such as concealing diagnoses from patients "for their own good" have given way to patient autonomy, the traditional reasons for withholding medical records appear to be in serious erosion.¹⁵ Some take the position that reviewing one's medical records helps rather than hinders the process of informed consent.¹⁶ Some physicians take the view that there is therapeutic advantage to the patient's reading their own records which increases understanding and reduces anxiety.¹⁷ The fiduciary responsibility of disclosure as well as the patient need to make final arrangements are arguments for disclosure or limited disclosure of even the worst diagnosis. Where physicians consider "record-sharing" part of the patient treatment, they report better patient participation in their own care, medical records in plain language and fewer errors.¹⁸ "Record-sharing" is not without its problems, however, (e. g. patient upset due to adverse comments; patient request to omit embarrassing information; disagreement by patient of diagnosis; disclosure of third party information).¹⁹

In the modern view of both the AMA and writers on the subject as well as some physicians, there seems to no longer be a reason for an absolute prohibition against patients directly reviewing their records. Each physician must determine for himself or herself how to best comply with the

obligation to do "...everything that can reasonably and lawfully be done to serve...[the interest of the patient]."²⁰ It is up for argument whether "record-sharing" is therapeutic to the patient, but less arguable that patient relations may be fostered by a cooperative willingness to supply information. Patient relations have often been cited as one of the chief reasons for medical malpractice actions. Most will agree that a patient "...who has to pay a lawyer to find out about his health status won't want to see that particular doctor again - unless it's in court."²¹

References

1. 34 Buffalo L. Rev. 317, 324 (1974).
2. *Id.* p. 324.
3. *Id.* p. 324.
4. *Id.* p. 325.
5. *Id.* 326. Also see "What Happens When Patients See Their Charts", *Medical Economics* p. 108 (Sept. 7, 1987).
6. *Current Opinions of the Judicial Council of the American Medical Association*, 7.01, 7.02, 7.04.
7. *Id.* 7.02.
8. American Hospital Association, The Patient's Bill of Rights, .02.
9. "The Patient's Right to Access to His Hospital and Medical Records", *Medical Trial Technique Quarterly* 295, 299 (1978).
10. *Id.* p. 300.
11. *Emmett v. Eastern Dispensary & Casualty Hospital*, 396 F.2d 931 (D.C. 1967).
12. *Connell v. Medical & Surgical Clinic*, 21 Ill. App. 3rd 383, 315 N.E.2d 278 (1974).
13. "The Patient's Right to Access to His Hospital and Medical Records", *Medical Trial Technique Quarterly*, p. 308 (1978).
14. *Gotkin v. Miller*, 379 F.Supp. 859 (1974).
15. *A Clinical Ethics*, 2.0 (Macmillan 1982).
16. 34 Buffalo L. Rev. 317, 325.
17. *Medical Economics*, p. 93 (Sept. 7, 1987)
18. *Id.*
19. *Id.* p. 94, 100, 106, 108.
20. *Current Opinions of the Judicial Council of the American Medical Association* 7.01.
21. *Medical Economics* p. 106.

Members who have legal questions they would like to submit for "diagnosis and treatment" may do so by sending them to: "Legally Speaking", c/o Arkansas Medical Society, Post Office Box 5776, Little Rock, Arkansas 72215.

Before prescribing, see complete prescribing information in SK&F CO. literature or PDR. The following is a brief summary.

WARNING

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. Associated widened QRS complex or arrhythmia requires prompt additional therapy. Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.

Precautions: The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity. Theoretically, a patient transferred from the single entities of triamterene and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Angiotensin-converting enzyme (ACE) inhibitors can elevate serum potassium; use with caution with 'Dyazide'. Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin [ACTH]). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is uncommon with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function. Thiazides may add to or potentiate the action of other antihypertensive drugs. Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and respiratory distress including pneumonitis and pulmonary edema, transient blurred vision, sialadenitis, and vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with other usual calculus components. Rare incidents of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.

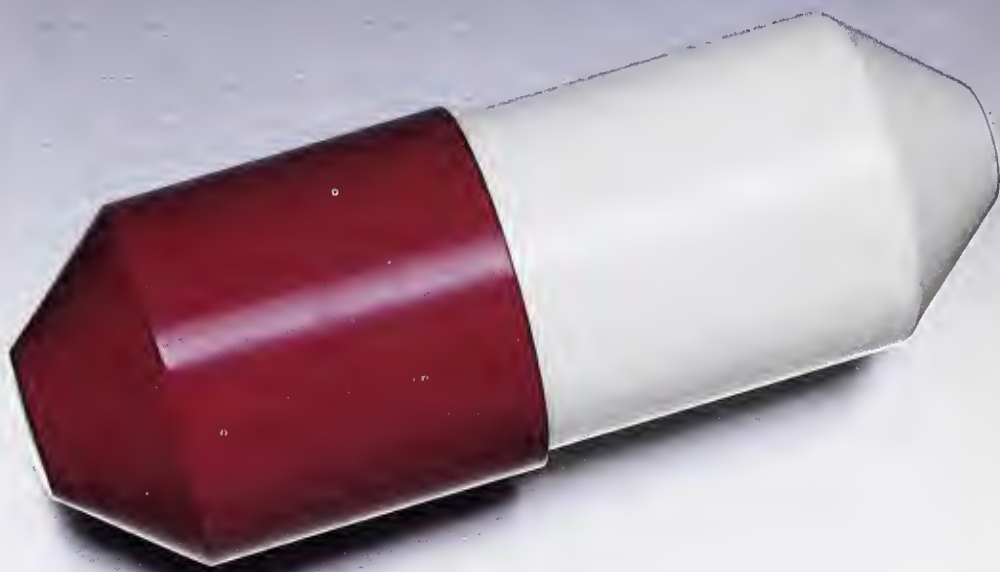
Supplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 1000 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only); in Patient-Pak™ unit-of-use bottles of 100.

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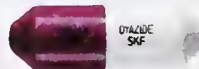
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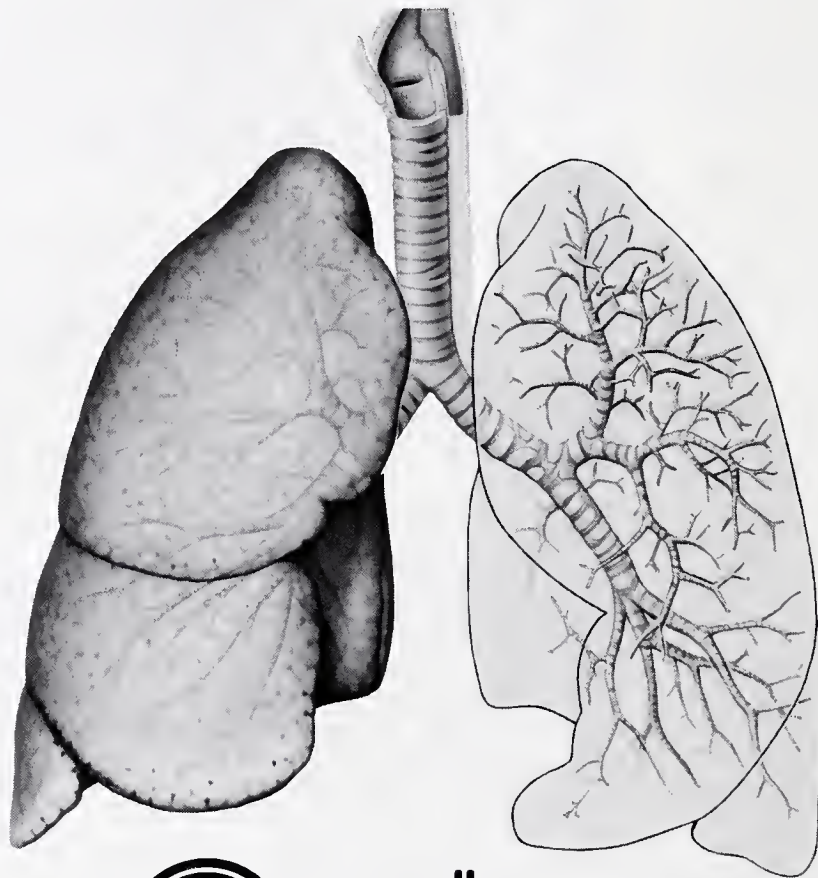
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offers effectiveness against
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Haemophilus influenzae and *Streptococcus pneumoniae*
(ampicillin-susceptible and ampicillin-resistant)

Note: Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

Ceclor[®] (cefaclor)

Summary. Consult the package literature for prescribing information.

Indication: Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Streptococcus pyogenes* (group A β -hemolytic streptococci).

Contraindication:
Known allergy to cephalosporins.

Warnings:
CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients. Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:

- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:

- Gastrointestinal (mostly diarrhea): 2.5%.
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever): 1.5%; usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nerv-

ousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.

- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%; and, rarely, thrombocytopenia.

Abnormalities in laboratory results of uncertain etiology

- Slight elevations in hepatic enzymes.
- Transient fluctuations in leukocyte count (especially in infants and children).
- Abnormal urinalysis; elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest[®] tablets but not with Tes-Tape[®] (glucose enzymatic test strip, Lilly).


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Eli Lilly Industries, Inc.
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A black and white photograph of a woman with dark hair, wearing a mustard-colored button-down shirt and dark trousers, sitting alone at a small round white table in a cafe. She is looking down with a somber expression. The cafe has many similar empty tables and white metal chairs with heart-shaped backs. The background is a dark, textured wall.

**"Living in the city
is lonely enough...
with herpes it's like
solitary confinement."**

ZOVIRAX[®] **(acyclovir)** **CAPSULES**

**Prevent genital herpes
recurrences
month after month with
daily therapy.**

(In controlled studies, recurrences were totally prevented for 4 to 6 months in up to 75% of patients.)

*Please see last page of this advertisement for
brief summary of prescribing information.*

ZOVIRAX[®] (acyclovir) CAPSULES

**Help free your
patients from
recurrences.**

Daily therapy

Coping with genital herpes is rarely easy. For some, the worst part is the pain and discomfort of frequent attacks — month after month, year after year. For others, the emotional burden presents a more difficult problem, leading to social isolation, anxiety, and diminished self-esteem.

Prevent or reduce recurrences

Although your patients have to live with herpes, they shouldn't have to suffer. Daily therapy with ZOVIRAX CAPSULES can help free them from the cycle of recurrent genital herpes. For many, one capsule three times a day can suppress recurrences completely while on therapy.

Generally well tolerated

Daily therapy with ZOVIRAX CAPSULES is generally well tolerated. The most frequent adverse reactions reported during clinical trials were headache, diarrhea, nausea/vomiting, vertigo, and arthralgia.

The physical and emotional difficulties posed by genital herpes are unique for each patient. The frequency and severity of recurrent episodes, as well as the emotional impact of the disease, should be considered when selecting daily therapy with ZOVIRAX CAPSULES.

*Please see brief summary of
prescribing information on next page.*



Prevent recurrences month after month*

ZOVIRAX®

(acyclovir) CAPSULES

Brief Summary

INDICATIONS AND USAGE: Zovirax Capsules are indicated for the treatment of initial episodes and the management of recurrent episodes of genital herpes in certain patients.

The severity of disease is variable depending upon the immune status of the patient, the frequency and duration of episodes, and the degree of cutaneous or systemic involvement. These factors should determine patient management, which may include symptomatic support and counseling only, or the institution of specific therapy. The physical, emotional and psycho-social difficulties posed by herpes infections as well as the degree of debilitation, particularly in immunocompromised patients, are unique for each patient, and the physician should determine therapeutic alternatives based on his or her understanding of the individual patient's needs. Thus Zovirax Capsules are not appropriate in treating all genital herpes infections. The following guidelines may be useful in weighing the benefit/risk considerations in specific disease categories:

First Episodes (primary and nonprimary infections — commonly known as initial genital herpes):

Double-blind, placebo-controlled studies have demonstrated that orally administered Zovirax significantly reduced the duration of acute infection (detection of virus in lesions by tissue culture) and lesion healing. The duration of pain and new lesion formation was decreased in some patient groups. The promptness of initiation of therapy and/or the patient's prior exposure to Herpes simplex virus may influence the degree of benefit from therapy. Patients with mild disease may derive less benefit than those with more severe episodes. In patients with extremely severe episodes, in which prostration, central nervous system involvement, urinary retention or inability to take oral medication require hospitalization and more aggressive management, therapy may be best initiated with intravenous Zovirax.

Recurrent Episodes:

Double-blind, placebo-controlled studies in patients with frequent recurrences (6 or more episodes per year) have shown that Zovirax Capsules given for 4 to 6 months prevented or reduced the frequency and/or severity of recurrences in greater than 95% of patients. Clinical recurrences were prevented in 40 to 75% of patients. Some patients experienced increased severity of the first episode following cessation of therapy; the severity of subsequent episodes and the effect on the natural history of the disease are still under study.

The safety and efficacy of orally administered acyclovir in the suppression of frequent episodes of genital herpes have been established only for up to 6 months. Chronic suppressive therapy is most appropriate when, in the judgement of the physician, the benefits of such a regimen outweigh known or potential adverse effects. In general, Zovirax Capsules should not be used for the suppression of recurrent disease in mildly affected patients. Unanswered questions concerning the human relevance of *in vitro* mutagenicity studies and reproductive toxicity studies in animals given very high doses of acyclovir for short periods (see Carcinogenesis, Mutagenesis, Impairment of Fertility) should be borne in mind when designing long-term management for individual patients. Discussion of these issues with patients will provide them the opportunity to weigh the potential for toxicity against the severity of their disease. Thus, this regimen should be considered only for appropriate patients and only for six months until the results of ongoing studies allow a more precise evaluation of the benefit/risk assessment of prolonged therapy.

Limited studies have shown that there are certain patients for whom intermittent short-term treatment of recurrent episodes is effective. This approach may be more appropriate than a suppressive regimen in patients with infrequent recurrences.

Immunocompromised patients with recurrent herpes infections can be treated with either intermittent or chronic suppressive therapy. Clinically significant resistance, although rare, is more likely to be seen with prolonged or repeated therapy in severely immunocompromised patients with active lesions.

CONTRAINDICATIONS: Zovirax Capsules are contraindicated for patients who develop hypersensitivity or intolerance to the components of the formulation.

WARNINGS: Zovirax Capsules are intended for oral ingestion only.

PRECAUTIONS: General: Zovirax has caused decreased spermatogenesis at high doses in some animals and mutagenesis in some acute studies at high concentrations of drug (see PRECAUTIONS—Carcinogenesis, Mutagenesis, Impairment of Fertility). The recommended dosage and length of treatment should not be exceeded (see DOSAGE AND ADMINISTRATION).

Exposure of Herpes simplex isolates to acyclovir *in vitro* can lead to the emergence of less sensitive viruses. The possibility of the appearance of less sensitive viruses in man must be borne in mind when treating patients. The relationship between the *in vitro* sensitivity of Herpes simplex virus to acyclovir and clinical response to therapy has yet to be established.

Because of the possibility that less sensitive virus may be selected in patients who are receiving acyclovir, all patients should be advised to take particular care to avoid potential transmission of virus if active lesions are present while they are on therapy. In severely immunocompromised patients, the physician should be aware that prolonged or repeated courses of acyclovir may result in selection of resistant viruses which may not fully respond to continued acyclovir therapy.

Drug Interactions: Co-administration of probenecid with intravenous acyclovir has been shown to increase the mean half-life and the area under the concentration-time curve. Urinary excretion and renal clearance were correspondingly reduced.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Acyclovir was tested in lifetime bioassays in rats and mice at single daily doses of 50, 150 and 450 mg/kg given by gavage. There was no statistically significant difference in the incidence of tumors between treated and control animals, nor did acyclovir shorten the latency of tumors. In 2 *in vitro* cell transformation assays, used to provide preliminary assessment of potential oncogenicity in advance of these more definitive life-time bioassays in rodents, conflicting results were obtained. Acyclovir was positive at the highest dose used in one system and the resulting morphologically transformed cells formed tumors when inoculated into immunosuppressed, syngeneic, weanling mice. Acyclovir was negative in another transformation system considered less sensitive.

In acute studies, there was an increase, not statistically significant, in the incidence of chromosomal damage at maximum tolerated parenteral doses of 100 mg/kg acyclovir in rats but not Chinese hamsters; higher doses of 500 and 1000 mg/kg were clastogenic in Chinese hamsters. In addition, no activity was found after 5 days dosing in a dominant lethal study in mice. In 6 of 11 microbial and mammalian cell assays, no evidence of mutagenicity was observed. At 3 loci in a Chinese hamster ovary cell line, the results were inconclusive. In 2 mammalian cell assays (human lymphocytes and L5178Y mouse lymphoma cells *in vitro*), positive responses for mutagenicity and chromosomal damage occurred, but only at concentrations at least 400 times the acyclovir plasma levels achieved in man.

Acyclovir has not been shown to impair fertility or reproduction in mice (450 mg/kg/day, p.o.) or in rats (25 mg/kg/day, s.c.). At 50 mg/kg/day s.c. in the rat, there was a statistically significant increase in post-implantation loss, but no concomitant decrease in litter size. In female rabbits treated subcutaneously with acyclovir subsequent to mating, there was a statistically significant decrease in implantation efficiency but no concomitant decrease in litter size at a dose of 50 mg/kg/day. No effect upon implantation efficiency was observed when the same dose was administered intravenously. In a rat peri- and postnatal study at 50 mg/kg/day s.c., there was a statistically significant decrease in the group mean numbers of corpora lutea, total implantation sites and live fetuses in the F₁ generation. Although not statistically significant, there was also a dose related decrease in group mean numbers of live fetuses and implantation sites at 12.5 mg/kg/day and 25 mg/kg/day, s.c. The intravenous administration of 100 mg/kg/day, a dose known to cause obstructive nephropathy in rabbits, caused a significant increase in fetal resorptions and a corresponding decrease in litter size. However, at a

maximum tolerated intravenous dose of 50 mg/kg/day in rabbits, there were no drug-related reproductive effects.

Intraperitoneal doses of 320 or 80 mg/kg/day acyclovir given to rats for 1 and 6 months, respectively, caused testicular atrophy. Testicular atrophy was persistent through the 4-week postdose recovery phase after 320 mg/kg/day; some evidence of recovery of sperm production was evident 30 days post-dose. Intravenous doses of 100 and 200 mg/kg/day acyclovir given to dogs for 31 days caused aspermatogenesis. Testicles were normal in dogs given 50 mg/kg/day, i.v. for one month.

Pregnancy: Teratogenic Effects: Pregnancy Category C. Acyclovir was not teratogenic in the mouse (450 mg/kg/day, p.o.), rat (50 mg/kg/day, s.c.) or rabbit (50 mg/kg/day, s.c. and i.v.). There are no adequate and well-controlled studies in pregnant women. Acyclovir should not be used during pregnancy unless the potential benefit justifies the potential risk to the fetus. Although acyclovir was not teratogenic in animal studies, the drug's potential for causing chromosome breaks at high concentration should be taken into consideration in making this determination.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when Zovirax is administered to a nursing woman. In nursing mothers, consideration should be given to not using acyclovir treatment or discontinuing breastfeeding.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS—Short-Term Administration: The most frequent adverse reactions reported during clinical trials were nausea and/or vomiting in 8 of 298 patient treatments (2.7%) and headache in 2 of 298 (0.6%). Less frequent adverse reactions, each of which occurred in 1 of 298 patient treatments (0.3%), included diarrhea, dizziness, anorexia, fatigue, edema, skin rash, leg pain, inguinal adenopathy, medication taste and sore throat.

Long-Term Administration: The most frequent adverse reactions reported in studies of daily therapy for 3 to 6 months were headache in 33 of 251 patients (13.1%), diarrhea in 22 of 251 (8.8%), nausea and/or vomiting in 20 of 251 (8.0%), vertigo in 9 of 251 (3.6%), and arthralgia in 9 of 251 (3.6%). Less frequent adverse reactions, each of which occurred in less than 3% of the 251 patients (see number of patients in parentheses), included skin rash (7), insomnia (4), fatigue (7), fever (4), palpitations (1), sore throat (2), superficial thrombophlebitis (1), muscle cramps (2), paronychia (1), menstrual abnormality (4), acne (3), lymphadenopathy (2), irritability (1), accelerated hair loss (1), and depression (1).

DOSAGE AND ADMINISTRATION: Treatment of initial genital herpes: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 10 days (total 50 capsules).

Chronic suppressive therapy for recurrent disease: One 200 mg capsule 3 times daily for up to 6 months. Some patients may require more drug, up to one 200 mg capsule 5 times daily for up to 6 months.

Intermittent Therapy: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 5 days (total 25 capsules). Therapy should be initiated at the earliest sign or symptom (prodrome) of recurrence.

Patients With Acute or Chronic Renal Impairment: One 200 mg capsule every 12 hours is recommended for patients with creatinine clearance ≤ 10 ml/min/1.73 m².

HOW SUPPLIED: Zovirax Capsules (blue, opaque) containing 200 mg acyclovir and printed with "Wellcome ZOVIRAX 200" - Bottles of 100 (NDC-0081-0991-55) and unit dose pack of 100 (NDC-0081-0991-56).

Store at 15°-30°C (59°-86°F) and protect from light.

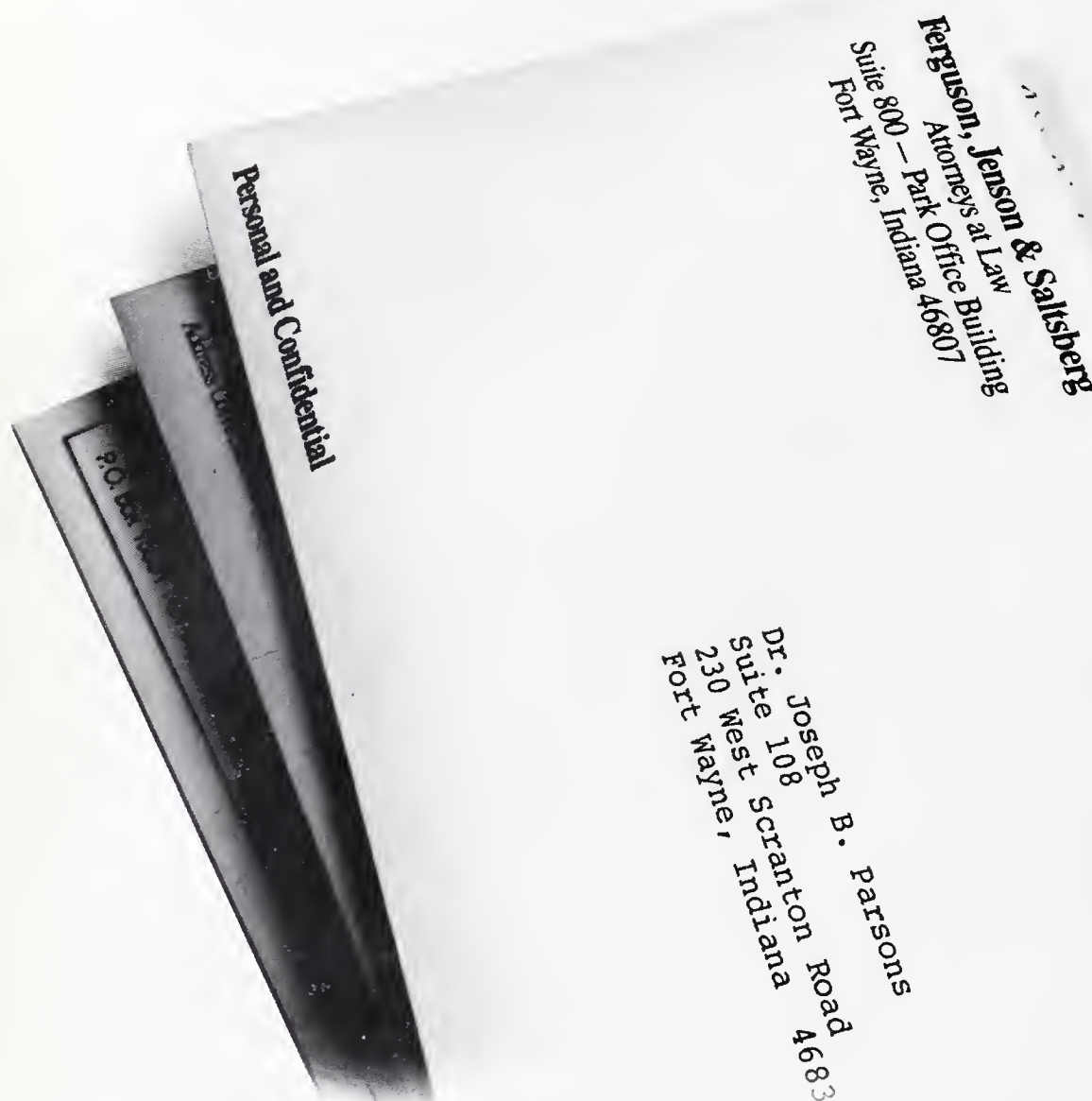
*In controlled studies, recurrences were totally prevented for 4 to 6 months in up to 75% of patients.

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The Diagnosis and Treatment of Femoral-Popliteal Occlusive Disease

G. Ken Hempel, M.D.*

Introduction

The human femoral artery and its branches are said to be the most frequent site of obliterative vascular disease to affect mankind.¹ Many would dispute this and say that coronary artery disease is more common. Certainly, heart disease is the most common killer. Since arteriosclerosis is a generalized process, femoral popliteal occlusive disease and coronary artery disease frequently co-exist, although one may become symptomatic before the other. If one considers all patients with femoral-popliteal occlusive disease, including those treated conservatively by sympathectomy or with primary amputation as well as those treated with bypass, then it probably does account for the largest percentage of our patients in peripheral vascular surgery.

Discussion

There are several peculiar features of this condition. Femoral-popliteal occlusive disease usually begins as a segmental occlusion in the distal part of the superficial femoral artery as it traverses Hunter's canal and the adductor hiatus.² The disease then progresses in a centripetal fashion and almost invariably halts at the origin of the deep femoral or profunda femoris artery. This vessel serves as a most vital collateral and may double in its size and capacity. It is these collaterals, which open as the process develops, that serve to maintain patency in the distal arterial segment. This is fortunate for both patient and surgeon, for it gives us the opportunity to restore pulsatile flow to the distal arterial tree. In approximately thirty percent of patients, the femoral-popliteal occlusion is accompanied by similar lesions in the tibial arteries of the calf. This feature carries great surgical significance as far as the indications for operation

and the magnitude of reconstruction, and the likelihood of long-term patency and limb salvage are concerned. Because obliterative arteriosclerosis makes up the majority of occlusive lesions that effect the femoral artery, such conditions as popliteal aneurysm, cystic adventitial disease, popliteal entrapment syndrome, and other rare lesions that involve the leg arteries will not be discussed. Proximal occlusive lesions in the aorto-iliac segment are also not discussed in this article. It should be pointed out, however, that when the occlusive disease develops at two levels, the more proximal lesion should be managed first.

Patient Evaluation

The patient evaluation begins with the history. More correct diagnoses are made with adequate history-taking than any other single test or exam. Particular reference to cardiac, cerebral vascular disease, hypertension and diabetes should be made. A smoking history will be found in as many as eighty percent of patients. Intermittent claudication, or pain in the calf brought on by exercise and relieved by rest, is a distinct manifestation of femoral-popliteal occlusive disease. An occasional patient will describe his claudication as a sense of weakness or fatigue rather than pain. The basic functional disturbance is a defect in transport of blood which carries oxygen and nutrients to the distal tissue. Claudication is a symptom of moderate impairment. As ischemia continues, rest pain, ulceration, and eventually gangrene, develops. Rest pain may be described as burning, made worse by heat and dependency - a condition called erythralgia. A more common presentation is ischemic neuralgia, described as a deep ache or throbbing pain. It is frequently located in the metatarsal area and is relieved by dependency. Ischemic ulcers are located in the distal legs and feet. They are irregular, have poor granulation beds, and bleed very little when traumatized. When edema is present, it usually is associated with secondary infection.

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Physical exam of a lower extremity should include the color of the extremity and digits in both the supine and upright position. Decreased hair growth, atrophic skin, and hypertrophic nails, are all signs of chronic arterial insufficiency. Skin temperature is best felt with the back of the hand of the examiner. Pulses are felt in the femoral, popliteal, dorsalis pedis, and posterior tibial position. They are recorded as present, absent, or reduced. Some people grade femoral pulses on a zero to four scale.

Some clinicians note the "venous filling time", which is the time required for the first vein on the dorsum of the foot to fill when the feet are placed in a dependent position after being emptied of blood by elevation. In the normal subject, the foot veins should fill in ten seconds.

The "capillary filling time" is the time required for normal color to return to the skin of the toes. This should be within ten seconds after elevation. In a recumbant position, after toe compression, the blanching should require only two seconds for normal "capillary return."

"Reactive hyperemia" can be measured with a blood pressure cuff on the thigh, inflated just above arterial pressure for five minutes. On release of the tourniquet, the flush should reach the toes in eight seconds.

Considerable information can be obtained by the non-invasive vascular laboratory test, which can be performed by any physician in the office or at the bedside. A doppler flow meter and a blood pressure cuff are all that are required. A good rule to remember is that the pneumatic cuff should be twenty percent wider than the diameter of the leg. Larger legs require wider cuffs. If the cuff is too narrow, the reading is erroneously high. The normal ankle pressure should be equal to or greater than the brachial systolic pressure. An ankle pressure of less than 40mm of Hg. suggests limb threatening ischemia. Pressure gradients of greater than 30mm of Hg. between adjacent sites are considered significant. A common practice is to relate the ankle pressure to the brachial pressure as a ratio. An ankle-arm index of below 1.0 is considered abnormal. Patients with claudication have an ankle-arm index in the .65 range. Patients with limb threatening ischemia will fall in the .35 range. In one series, an absolute pressure of 60 mm. correctly identified eighty-six percent of the viable limbs and seventy-seven percent of the non-viable limbs.³

Sometimes diabetic patients with calcified arteries, which are not compressible, will have falsely high readings. Another test available in the vascular laboratory, which will accurately distinguish the presence or absence of occlusive disease in patient's with rigid arteries, is the pulse volume recording (PVR). This plethsmographic test was developed by Raines in the early 1970s. This test depends on the increase in volume of a limb that occurs when blood enters the limb during systole. Using air-filled cuffs applied to the thigh, calf, and ankle, a waveform is generated, which has a brisk, sharp rise to a systolic peak and slow return with a prominent dicrotic notch. Moderate disease is characterized by a rounded systolic peak. Severe occlusive disease

produces a flattened wave with a slow uptake and slow downstroke.

These semiquantitative tests are obviously important in confirming the presence or absence of disease and following the progression of occlusive lesions. They are helpful in predicting healing of ischemic ulcers, following the patency of bypass grafts, or selecting sites for amputation.

Surgical Indications

Although individual surgeons differ in their indications for surgery in patients with occlusive lesions below the inguinal ligament, all agree that ischemic rest pain, ulceration, or gangrene, require immediate revascularization. If the arteriogram reveals a fixable lesion, surgery is indicated unless the patient has some life-threatening medical condition, or is bedfast with no hope of an ambulatory existence. Intermittent claudication is a relative indication for surgery. Certainly if it is progressive or interferes with one's ability to earn a living, surgery is justified.

The reversed saphenous vein has become the standard graft against which all other grafts are measured. Five-year patency rate of fifty to seventy percent have been reported in a number of series.^{4,5} In our series from Baylor in Dallas, the presence of good arteriographic runoff had a more favorable effect than pre-operative indications for surgery on long-term patency.⁶ Contrast this result with Veith's report on the multicenter randomized comparison of reverse saphenous vein grafts and PTFE. Although patency rates are similar for two years, by four years they were significantly different with sixty-eight percent patency for reversed saphenous veins and forty-seven percent patency rates for PTFE grafts.⁷

The autologous vein has a number of advantages. There is no foreign body or rejection response. It cross-flexion creases without kinking. It contains a viable clot resistant intimal lining. It is also capable of remaining patent under conditions of restricted flow. The only reason for removing and reversing the vein is to remove the valvular obstruction to arterial flow. Bothersome have been reports of up to twenty percent of patients who present for surgery who have a saphenous vein that is too small to use, if you accept 4 mm as the minimum diameter when the vein is used in a reversed position.⁸ With these considerations, we and others began to use the saphenous vein in situ as described by Leather and Karmody.⁹ With this technique, one is able to use veins down to 2.5 mm in diameter. Also, the larger end of the vein is sutured to the larger common femoral or superficial femoral artery and the smaller distal end of the vein gives a better size match for suture to the popliteal or even a tibial artery. Early attempts by Connally to use the vein in situ with valve fracture led to high rates of occlusion.¹⁰ Hall improved on patency rates by a valve excision technique, but many surgeons felt this was tedious and time-consuming.¹¹ The technique of Leather and Karmody involves incision of the valves using a valvulotome or valve cutter. This provides rapid removal of the valves with minimal trauma to the

intimal surface. A four-year patency rate of seventy-five percent and a ninety-three percent vein utilization rate has been reported. Care must be taken to ligate all the major venous branches since each has the potential to develop as an AV fistula. Only a few minor wound problems have been reported from the superficial subcutaneous position of the in situ vein bypass.

Conclusion

Femoral-popliteal occlusive disease is the most frequent lesion seen in the peripheral vascular surgical practice. A diagnosis can be made in a high percentage of cases by careful history and physical exam. The vascular lab test will aid in making the diagnosis by obtaining objective information. Intermittent claudication is a relative indication for surgery. With rare exception, ischemic rest pain or gangrene are absolute indications for surgery. A number of grafts are available. The best results for a protracted period of time have been obtained with the reversed saphenous vein bypass. The in situ saphenous vein bypass is currently gaining great popularity. It has the advantage of greater vein usefulness because one is able to use smaller veins. It may also have a higher early and long-term patency. Four year patency rates of 75% and 93% vein utilization rates have been reported with the in situ saphenous vein bypass for femoral popliteal occlusive disease.

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ELECTROCARDIOGRAM OF THE MONTH

Bob Banister, M.D.
John W. Watson, M.D.
UAMS Division of Cardiology
Little Rock, Arkansas

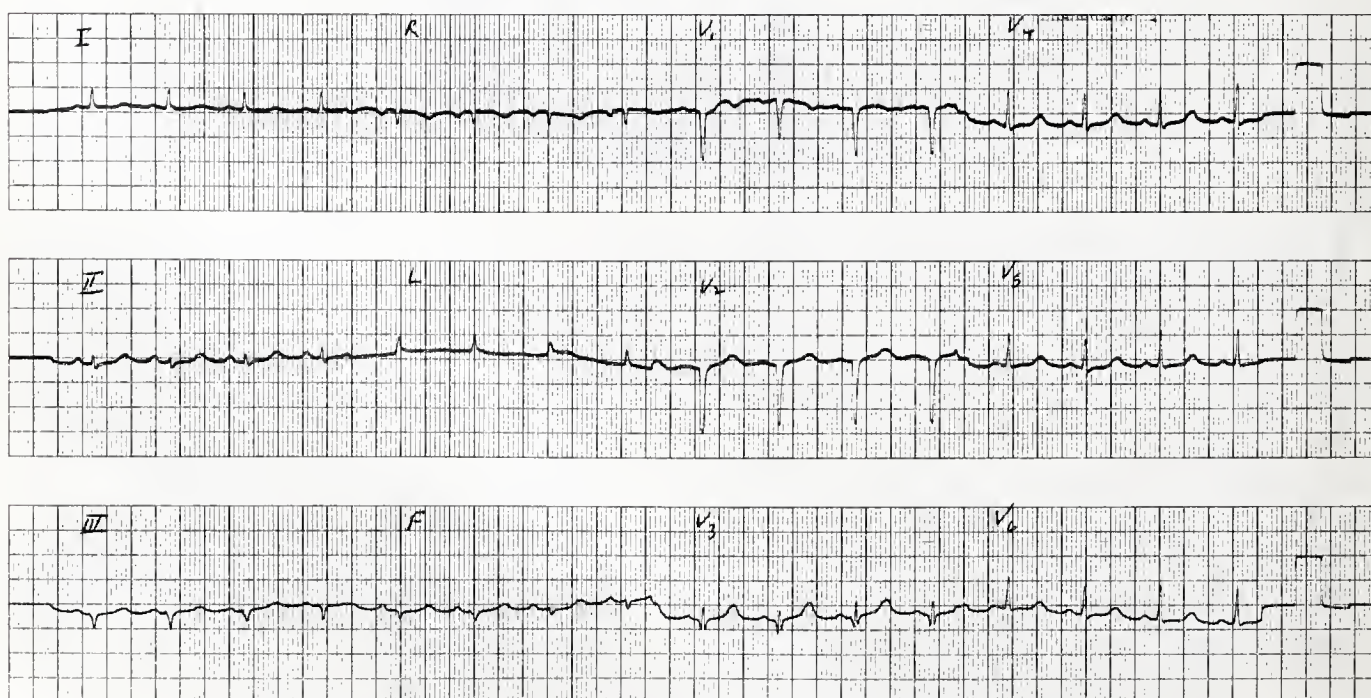
CLINICAL HISTORY:

J. D. is a 60-year-old man who has developed malaise, cold intolerance, and slow mentation over a three-year period of time. His physical examination shows hypotension, obesity, and slow reflexes. What do you think of his ECG?

DISCUSSION:

The trace shows sinus rhythm, rate 95/min. The voltage is low as measured in the limb leads. Minor non-specific changes are noted in the ST-T segments. The history and physical as given both suggest hypothyroidism. The low voltage on the ECG is compatible with this entity. However, the rate is faster than one might expect in many patients with hypothyroid disease. Nevertheless, a bit of thyroid evaluation is in order.

The editor wishes to thank Dr. Banister of Conway, Arkansas for his help with this month's ECG.



Cancer Research in Arkansas

*Deborah O. Erwin, Ph.D., and James Hardin, M.D.**

A number of cancer research projects, supported through grants from the American Cancer Society and the National Cancer Institute are currently being conducted at the Arkansas Cancer Research Center on the University of Arkansas for Medical Sciences (UAMS) campus, Arkansas Children's Hospital and John L. McClellan Memorial veterans Administration Hospital. This article does not describe all of the ongoing cancer research, but does provide some idea as to the types of investigations being conducted.

It is generally felt by both physician and scientists that the treatment of cancer for cure by traditional regimens such as surgery, chemotherapy and radiotherapy probably has been maximized. To make further progress in combating this disease requires an increase in knowledge of its biochemistry, cell biology and molecular biology, as well as better and earlier detection of primary and recurrent disease. Such research is being performed by a number of aggressive scientists and clinicians.

Drs. Ann Benson and Lyndal York of the Biochemistry Department are studying the basic mechanisms used by an organism to protect itself from the initiation of cancer by environmental chemicals. These studies are based on the observation that some compounds can be given to protect the effects of carcinogens. It appears that the protective chemicals include a group of enzymes called glutathione transferases. The initial studies have shown that some enzymes of the group are preferentially inducible by anti-carcinogens and apparently play a major role in the neutralization of certain carcinogenic compounds. These investigators are currently attempting to learn more about how these enzymes function in the process of detoxification of carcinogenic compounds.

Dr. Kurt Henle, with the Department of Internal Medicine, University of Arkansas for Medical Sciences, is study-

ing tumor targeted therapy by researching the combined effects of tumor enzymes and heat radiation.

Dr. Timothy J. O'Brien and his colleagues in the Departments of Obstetrics & Gynecology and Biochemistry are studying tumor markers. Tumor markers are molecules, usually proteins, which are specifically synthesized and released by a tumor and can be evaluated in body fluids to determine a patient's status. Therefore, tumor markers are tools to determine if a patient has a tumor, if the tumor is regressing, progressing or, in some cases, whether the disease has recurred, and to what extent. The major advantage of tumor antigens, or markers, for these types of analyses, is that they are essentially noninvasive and only require a sample of the patient's serum or urine.

Dr. O'Brien's research is concentrating on two classes of products: 1) a specific antigen for ovarian tumors, called CA-125, and 2) a group of proteins coded by oncogenes. CA-125 is the name of a tumor marker of which very little is known other than its presence in a patient's serum at relatively high levels usually indicates the presence of a specific type of ovarian cancer. Since this disease is often deadly and subject to recurrence after treatment, this specific tumor marker is quite valuable. Dr. O'Brien, along with Drs. Gerald Quirk, Gaylon Brunson, Gary Bannon and James Hardin, are studying the nature of the protein, its gene and when and how the protein is expressed.

This same group is attempting to use oncogene products as possible tumor markers. All humans have oncogenes within the DNA in their cells. These genes or DNA segments contain the information needed to code proteins which allow cells to grow at high rates, such as must occur in the developing fetus. Sometime early in development, the switch which controls the expression of these genes is turned off. In many cancer cells, this switch is turned back on by mechanisms which are not fully understood. However, a characteristic of many cancer cells is the production of proteins coded by oncogenes. If these are present in body fluids, they would be excellent tumor markers because

*American Cancer Society - Arkansas Division, 5520 West Markham, Little Rock, Arkansas 72205

neither normal adult nor childhood cells produce these proteins or only produce them at very low levels. This group of researchers is actively examining a number of oncoproteins to determine their usefulness as tumor markers.

The Arkansas Cancer Research Center, utilizing grant funds made available through the American Cancer Society and local fund raising, has given seed grants to several young researchers. These research projects, summarized below, are awarded to scientists and clinicians for the study of cancer biology.

Dr. David Becton of the Hematology-Oncology Division of Arkansas Children's Hospital is investigating the basic biology of acute non-lymphocytic leukemia. In particular, he is investigating the physiological agents that cause cells, from patients with this disease, to differentiate. In addition, he is studying a very important enzyme involved in many aspects of growth control, protein kinase C. Through this research, he ultimately hopes to develop better treatments for this severe childhood disease.

Dr. Gary Elliot, a member of the School of Pharmacy, is developing new anti-neoplastic drugs. His major interest is in drugs that bind metals, called chelators, which are necessary for cell growth. He is presently working on novel iron chelators which have antineoplastic properties.

An interesting facet of cancer is that certain families appear to be either genetically susceptible or resistant to the development of the disease. Dr. Susanne Gollin of the Pathology Department at Arkansas Children's Hospital is studying one aspect of this phenomenon. When stained with specific dyes, some chromosomes show unstained gaps called fragile sites. These gaps are inherited and are associated with certain types of cancer. If the biochemical basis of fragile sites formation can be determined, researchers will begin to understand why some people are more predisposed to the development of cancer.

Dr. William Hendry of the UAMS Department and Dr. Daniel Sheehan of the National Center of Toxicological Research in Jefferson County are studying the role of hormones, particularly estrogens, in the development of reproductive tract cancer in a rodent model system. With the widespread use of estrogenic compounds in the development in the environment, such as birth control pills and treatments for infertility, the potential for inducing cancer is greater. These investigators can determine directly how hormones are involved in the induction of specific cancers

in well-defined rodent model systems. This can be used to understand this process in humans. Many compounds including tobacco products and ethanol can suppress the immune system allowing an illness to begin. Dr. Joe Jones of the Pathology Department is trying to understand how ethanol suppresses the immune system and how this suppression affects tumor growth. This research has applicability for better understanding the etiology of several head and neck cancers. Dr. Dale Tabor of the Pediatrics Department also plans to study the immune system in cancer. His goal is to understand ways to manipulate macrophage (one cell involved in bodily defenses) to better protect the individual.

Dr. Charles Lumpkin of the V. A. Hospital has two major research interests: 1) Why do cancer cells grow in an uncontrollable fashion? and 2) Why do cells lose the ability to divide as they grow older? He is studying these problems by introducing oncogenes into human cells which can no longer divide, to determine if they can reinitiate growth. To do this, he will use a sophisticated device to individually inject DNA into a cell without unduly damaging the cell. Dr. Lumpkin is one of a limited number of individuals in this country equipped to conduct these experiments successfully.

Dr. Ann Maners of the Department of Radiology and Central Arkansas Radiation Therapy Institute and Dr. Nancy Snyderman of Otolaryngology are using sophisticated instrumentation to study basic problems in cancer biology and cancer diagnosis. These clinical scientists want to determine whether using flow cytometry to analyze both the DNA content and the time it takes cells to progress through cell division will allow them to predict how squamous cell carcinomas will respond to therapy. By studying cells from individual patients and how they respond to therapy, hopefully better diagnostic procedures and treatment can be developed.

In summary, this brief review illustrates that a broad range of research into the clinical and basic aspects of cancer is ongoing in Arkansas. This research relies on the latest instrumentation, requires a team approach and requires the continued support of organizations such as the American Cancer Society and National Cancer Institute, and the Arkansas Cancer Research Center. Hopefully, these efforts in basic and clinical research in Arkansas will produce better ways to treat and control cancer.

Adenocarcinoma of the Prostate

*Barre Finan, M.D., William E. Atkinson, M.D., H. Howard Cockrill, Jr., M.D., Robert C. Landgren, M.D., and S. William Ross, M.D.**

Problem

A 72-year-old man with a previous diagnosis of poorly differentiated adenocarcinoma of the prostate presented to the Second Opinion Panel for a discussion of his treatment options.

Approximately six years earlier he had a pacemaker put in and was being treated for arteriosclerotic heart disease. He had a long history of urinary problems, including marked symptoms of prostatism. About two years ago he was admitted to a hospital for evaluation for possible prostatectomy and prostatic biopsy. A transperineal prostatic biopsy revealed a grade 1 adenocarcinoma of the prostate. Because of the patient's age and his cardiovascular disease, it was decided not to proceed with a staging pelvic lymph node dissection for possible radical prostatectomy. A transurethral resection of prostate (TURP) and bilateral vas ligation were done. The patient experienced prolonged bleeding and reported that there was a long history of abnormal bleeding in his family, both in himself and his father. The tissue removed at the time of the TURP was benign prostatic hypertrophy (BPH), showing no evidence of carcinoma.

One year later a skin malignancy of the right upper chest wall near the pacemaker was removed and no bleeding occurred. Apparently this surgical procedure was done after the patient ceased taking quinidine sulfate (Quinidex).

Approximately three months ago, a 1 cm nodule was found on the left side of the prostate, and the patient was admitted to a hospital for urinary tract evaluation and prostatic biopsy. Needle biopsy of the prostate gland revealed moderately and poorly differentiated adenocarcinoma of the prostate.

With a history of questionable bleeding problems, cardiovascular problems, and stage C adenocarcinoma of the

prostate, the patient presented for discussion of the management of his disease.

Pathology Review

Dr. Atkinson: The histopathologic material was examined, and we agreed with the diagnosis of moderately and poorly differentiated adenocarcinoma of the prostate. Using the Gleason's grading system this adenocarcinoma appears to be a $3+4=7$.¹

Diagnostic X-Ray Evaluation

Dr. Cockrill: Prior to meeting with the panel, the patient had an acid phosphatase performed at St. Vincent Infirmary, and the result was within normal range. The patient's x-ray films and bone scans with total body imaging were reviewed. The abdominal and pelvic computed tomography revealed a mildly enlarged prostate with possible tumor invasion to the seminal vesicles. With this stage C lesion the chances are approximately 50%-80% that positive pelvic lymph nodes are present even though these had not been demonstrated by radiographic means.

Surgery Opinion

Dr. Finan: Rectal examination of this gentleman's prostate was done and revealed that his prostate was fixed in his pelvis. Since this patient had a pathological Gleason's score of 7, evidence of seminal and vesicle invasion on CT scan, and a large, fixed prostate in his pelvis, I do not feel that he is a candidate for a radical prostatectomy. In fact, this patient probably does not have stage C disease, but probably has positive pelvic lymph nodes, making him a stage D disease. It is unlikely that radical prostatectomy or definitive x-ray therapy would help in this case. The treatment of choice for his lesion would probably be bilateral orchiectomy, either at the present time, or when further symptoms of metastatic disease develop. Hormonal therapy is an option, but due to his cardiovascular status, I would not recommend that at the present time.

* St. Vincent Infirmary Cancer Center, Two St. Vincent Circle, Little Rock, Arkansas 72205

Radiation Therapy Opinion

Dr. Landgren: Irradiation is a definite option in patients with stage C prostate cancer. Permanent cures are achieved with radiation even though we know that at least 50% of the patients in stage C have pelvic lymph node involvement by tumor. A recent report from a major radiation center showed survival rates in stage C prostate cancer of 60%, 35%, and 30% at 5, 10, and 15 years respectively.² Whether hormone manipulation in addition to radiation has a beneficial or deleterious effect on survival is not clear from the literature.

Dr. Ross: The bleeding tendency in this patient was apparently secondary to quinidine. If it was not, the hemostatic mechanism would still be correctable and should not contraindicate orchiectomy. Platelet aggregation studies should be included in hemostatic mechanism evaluation. High dose diethylstilbestrol (DES), 5 mg per day, is effective but contributes to cardiovascular toxicity.^{3,4} Three mg per day appears to be equally effective but is still associated with increased thromboembolic disease. Low dose, 1 mg per day, is safe but ineffective.⁵ Intermediate dose, 2 mg per day, may be safe and effective but has not been evaluated adequately. Recent combinations of testosterone agonist (flutamide) and luteinizing hormone-releasing hormone agonist (leuprolide or buserelin) may hold greater promise for effectiveness without cardiovascular side effects but at greater cost.^{6,7} Surgical staging in this patient is not feasible. I believe the patient should be offered the option of radiation because there is a 20%-50% change of no pelvic node metastasis. I would also recommend an orchiectomy. Chemotherapy is not indicated because of weak effect. It is being evaluated in an adjuvant setting.

Consensus

The panel agreed that this patient with poorly differentiated adenocarcinoma of prostate had a stage C lesion with

probably lymph node spread. Radical surgery was not recommended by the panel. It was felt, however, that bilateral orchiectomy was preferred and that it would not be necessary to follow surgery with hormonal treatment. The panel was not in total agreement regarding the benefit of radiation therapy for this stage disease, but it was agreed that some studies indicate that radiation therapy is indicated in this type of prostate cancer. For that reason, radiation therapy was still a viable option that the patient could discuss with his physician.

Acknowledgment

The authors wish to thank Marjorie McMinn for her editorial assistance in the preparation of this paper.

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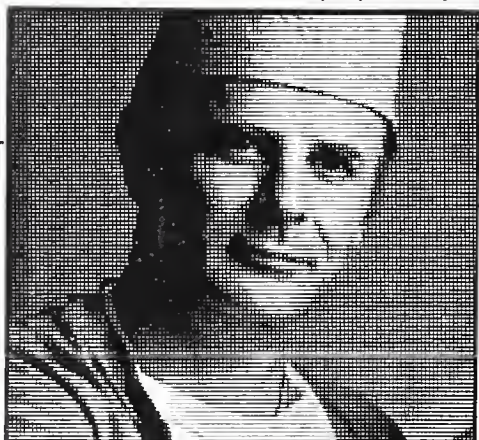
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Tomorrow: Will Today Look Good?

J. David Busby, M.D, ABFP*

Many physicians in Arkansas are frustrated by the ever-increasing scope of peer review activities. Some have stated that the practice of medicine is overshadowed by increasing bureaucratic regulations. Some talk about the medical profession of the past and recall the "good old days." Will the physicians of tomorrow look back and consider this period of time as the "good old days" of medicine?

Introduction

While peer review activities have expanded in the last few years, it is certain that there will be additional changes which could be even more frustrating. The September 1987 issue of the *American Family Physician* noted that health care spending in 1986 was approximately 10.9% of the Gross National Product, or \$458 billion. Approximately 20% of that, or \$92 billion, was in physician charges; 39% was in hospital expenditures. The increase in the health care expenditures was at a slower pace in 1984, 1985, and 1986 than in the past; however, it still represented an increase greater than that of inflation. The September 25, 1987 issue of the *American Medical News* noted that Medicare premiums were to jump 38% beginning January 1, 1988. This is approximately a \$6.90 increase per month. Only a portion of the \$6.90 per month increase was due to increased physician charges. It is certain, however, that physicians will be portrayed as the chief culprits in the increase in the Medicare premium and in the overall increase in the health care expenditures. Some of the history of peer review by the Arkansas Foundation for Medical Care will be reviewed and the changes to be implemented in the near future as well as other proposed changes will be discussed.

History

In response to legislation (Public Law 92-603), the Arkansas Foundation for Medical Care was formed by Arkansas physicians in the early 1970's when it was apparent that medical review would be a reality. The Arkansas Foundation for Medical Care became a fully-functional PSRO in 1975. In 1984, the Arkansas Foundation for Medical Care signed a contract with the Health Care Financing Administration (HCFA) to become the Arkansas Professional Review Organization (PRO). In 1986, it was the first PRO in the nation to sign the second-cycle contract.

Public Law 97-248, or TEFRA, and Public Law 98-21, Social Security Amendments, created the PRO program and repealed PSRO. The PRO is distinctly different from the PSRO. A PRO can be located in a state other than the state where review is conducted; the PSRO could not. The PRO may be a "for profit" group; the PSRO had to be a non-profit group. A PRO is not required to be a physician-controlled organization, whereas the PSRO had to be physician-controlled.

Under Title XVIII, the PRO must review Medicare admissions to determine that the care was medically necessary; that it met professionally-accepted standards; and that it was provided in the most economical setting.

The Arkansas Foundation for Medical Care Board of Directors is made up of twenty-three individuals, twenty of whom are physicians. The three lay members of the Board

* Arkansas Foundation for Medical Care, Inc., Post Office Box 1508, Fort Smith, Arkansas 72902-1508. Presented in part at the Fall Meeting of the Arkansas Medical Society, North Little Rock, October 4, 1987.

of Directors individually represent the consumer, business, and providers. Physician members have an average age of 53, the range being from 38 to 66. They come from towns of all sizes across the state of Arkansas. All twenty are members of the Arkansas Medical Society; six serve as Councilors; two are current officers; two are past presidents; and twenty Arkansas Medical Society committee appointments are held by AFMC Board members.

The Board includes ten family and/or general practitioners, one pulmonologist, one internist, two cardiologists, one gastroenterologist, two general surgeons, one urologist, one obstetrician-gynecologist, and one pathologist. Nine of the Board members are certified by the American Board of Quality Assurance and Utilization Review Physicians. Seven of the physicians live in urban areas and thirteen in rural area. The only cities in Arkansas designated as urban by the HCFA are Little Rock, Texarkana, Fort Smith, Fayetteville, West Memphis, and Pine Bluff.

The Changing World of Medical Review

The world of medical review is a rapidly changing one, as documented by the requests for contract modifications submitted to HCFA by the nation's fifty-four PROs during the second-contract cycle (two years). Six hundred and seventy-five requests have been received; 73 are still pending at HCFA. These contract modifications are due to changing review requirements by HCFA.

That it is a rapidly changing world is also documented by the change order received by the Arkansas Foundation for Medical Care on September 3, 1987. The change order stated that 30 days before the implementation date of October 1, 1987 the Arkansas Foundation for Medical Care had to have Memoranda of Understanding (MOU) with each of the home health agencies, hospital outpatient departments, ambulatory surgery centers, and skilled nursing facilities. This was to provide for the review of Medicare beneficiary-written complaints.

The Arkansas Foundation for Medical Care has worked with the Department of Health and the Office of Long-Term Care (Arkansas Department of Human Services) to develop a protocol for review of written beneficiary quality-of-care complaints. The Health Department and the Office of Long-Term Care will refer complaints (after their initial investigation) to the Arkansas Foundation for Medical Care. These will be followed-up as appropriate.

Sanctions and Due Process Assurances

In a recent report from the Office of Inspector General, it was reported that 134 sanction requests from the PROs have been received during the current contract cycle. One hundred and sixteen of those have been processed; 39 have been rejected. Forty of the sanctions were for poor care or for performance of unnecessary procedures. Ninety-three were considered to represent gross-and-flagrant quality-of-care problems; one was because of lack of documentation. Twenty-three physicians and one hospital have been as-

sessed monetary penalties. Fifty physicians and one hospital have been excluded from medicare participation.

Significant changes have been implemented this year in the sanction process as a result of the activities of organized medicine - especially the Texas Medical Association, the American Medical Association, and the AARP. All worked together to see that certain changes were made. The changes improve due process assurances for the practitioner. Now the practitioner may take an attorney to a sanction meeting, have expert witnesses, is entitled to a verbatim transcript of his meeting with the PRO, and may submit additional material within five days of the meeting. These changes have been implemented by the AFMC. Most were in effect already in Arkansas prior to the official change.

COBRA

The Anti-Dumping Statute provided by the Consolidated Omnibus Budget Reconciliation Act (COBRA) of 1985, is one of the most significant statutes to affect Arkansas hospitals. The statute came as a result of numerous people testifying before Congress, including Dr. Ron Anderson from Parkland Hospital and the University of Texas Southwest at Dallas. He reported that Parkland Hospital was being "dumped" on by smaller hospitals sending patients, usually patients without insurance, to Parkland in Dallas. These patients often had complicated and serious problems that required extensive, expensive, and intensive care.

The Anti-Dumping Statute applies only to women in active labor and to emergency patients. Documentation must be appropriate to make certain a hospital can not be accused of dumping when patients are transferred from an emergency room to another hospital. The patient must be screened by appropriate medical personnel before being transferred. The patient must agree to the transfer, and this must be documented. Hospital personnel must document that the receiving hospital has space available, personnel, and technological equipment to treat the patient, and that the hospital is willing to accept the transfer. Records must be sent with the patient, and the hospital must assure appropriate transportation with qualified personnel and equipment. If the patient is not stable, a physician must certify that the benefit of the transfer is greater than the risk of taking time to stabilize the patient or that the patient had requested immediate transfer.

There is a two-year statute of limitations on the COBRA Anti-Dumping Statute. Enforcement is severe. The Regional Office of the HCFA and the state survey agency, the Department of State Licensure in the Arkansas Health Department, investigate and act on the reported violations of the COBRA Anti-Dumping Statute. A hospital may be suspended or terminated on very short notice from Medicare participation. The hospital and the physician may be fined \$25,000 each. The patient may file civil suit against the hospital, and the receiving hospital may file civil suit against the referral hospital.

Thirty-three of these possible violations have been received by the Regional Office; two were from Arkansas. One was found not to be a violation of the Anti-Dumping Statute. It is possible that the other one will be considered a violation of the statute and could result in significant problems for the referring hospital.

Other changes legislated by COBRA include the precertification of assistants at time of cataract surgery. (This process is already in operation by the Arkansas Foundation for Medical Care). COBRA requires 100% review on certain procedures and second opinion on certain procedures; this is still under development in the Department of Health Care Financing Administration. It must go to the Executive Office of Management and Budget before it can be implemented. It may be several months before this is finalized.

Program Protection Act, requires the Secretary of Health and Human Services to exclude (for up to five years) any physician convicted of a criminal offense related to the delivery of health care services under Medicare or state programs, or any physician convicted of criminal neglect or abuse of patients. This will prevent physicians who have been convicted in one state from moving across the border to another state and setting up "shop". The Secretary is given the power to exclude permissively any physician convicted of fraud or a drug abuse.

The "BANK"

Congress has directed that the Secretary of Health and Human Services establish a "bank" for stockpiling information regarding physicians. All malpractice carriers must report any claims paid involving a physician. They must

Congress has directed that the Secretary of Health and Human Services establish a "bank" for stockpiling information regarding physicians. All malpractice carriers must report any claims paid involving a physician. They must report the physician's name, the amount paid, the hospital, a description of the alleged acts, and other information considered necessary by the Secretary of Health and Human Services. There is a \$10,000 penalty for each failure to report.

COBRA calls for the denial of payment in certain cases due to poor quality of care. This is quite frightening. The regulations necessary to implement denial of payment because of poor quality of care are not yet developed.

COBRA requires HMO review, already under way nationally.

OBRA, the next year's version of the Omnibus Budget Reconciliation Act (1986), required the inclusion of Puerto Rico in the PPS system. Ambulatory surgery centers come under review by OBRA. The Pennsylvania PRO contract of July 1, 1987 required review of ambulatory surgery centers. This will be tested in a few other states in the next contract cycle. OBRA prevents hospitals from billing patients until noon of the day after a PRO decision is received whenever the beneficiary has requested expedited review of a hospital-issued denial.

OBRA requires the review of intervening care for hospital readmissions of patients within 31 days, to be implemented in 1988. It requires that physicians' offices be under review beginning in 1989 for the intervening care provided these patients. OBRA requires an allocation for quality-of-care review by the PROs. Small area analysis is called for by at least a few PROs under OBRA. OBRA requires consumer representation on the PRO Board. The Arkansas Foundation for Medical Care has a consumer on its Board.

Future and Proposed Changes

Public Law 100-93, the Medicare/Medicaid Patient and

report the physician's name, the amount paid, the hospital, a description of the alleged acts, and other information considered necessary by the Secretary of Health and Human Services. There is a \$10,000 penalty for each failure to report.

Sanctions by boards of medical examiners involving the revoking or suspension of license, censure, reprimand, or probation of a practitioner must be reported. It must be reported when a physician voluntarily surrenders his license to prevent prosecution. The cause must be specified in every case reported.

Health care entities, including hospitals, must report to the "bank" anytime a physician's privileges are suspended or reduced for at least 30 days because of poor professional conduct or incompetence. If a physician accepts surrender or reduction of privileges related to the investigation of incompetence or improper professional conduct, it must be reported.

Professional societies must report any adverse action regarding the professional membership due to medical malpractice, incompetence, or professional misconduct.

The "bank" has not yet been established but is supposed to be operation in 1987. Hospitals will be required to access the "bank" every time a physician applies to the staff and then every two years when the physician is reappointed to the staff. Information may be requested at other times. This "bank" applies to all physicians, all osteopaths, and all dentists. The Secretary of Health and Human Services is

instructed to develop Memoranda of Understanding between the Department of Defense, the VA, and the Drug Enforcement Administration.

More Changes

On October 1, 1987, hospital alcohol and drug treatment units were included in the PPS (Prospective Payment System). They are no longer exempt. Certain DRGs have been set up for this. DRG 433 is for alcohol, drug abuse, or dependence when the patient leaves against medical advice; 437 is for alcohol or drug abuse or dependence with detoxification and rehabilitation.

Age as a comorbid factor has been deleted. No longer will the patient of age 70 automatically be considered as having a comorbid factor. It was found that an otherwise healthy 71-year-old patient did not require any more resources than the 69-year-old patient.

The HCFA approved major changes in ICD-9-CM coding pertaining to respiratory disease, effective October 1, 1987. The AFMC has developed a policy statement regarding these changes after consultation with members of the Arkansas Thoracic Society. This policy statement has been mailed to each hospital and to pulmonologists in the State.

Certain surgical procedures are being taken off the grouper to prevent these from causing DRG 468's in the future. These are 86.09 and 86.3, and primarily relate to incision of skin or excision of skin lesions. This should be welcomed by most hospitals, as it will allow physicians to remove small lesions without coming under significant review because of a DRG 468.

Release of Mortality Statistics

Mortality statistics are being released the latter part of 1987. These statistics are from over 6,000 hospitals and document the deaths of Medicare patients which occurred in 1986, including the deaths within thirty days of hospital discharge. Approximately 80% of hospital-associated deaths will be included in this study. Deaths will be grouped according to high-risk or low-risk problems in one of sixteen

categories. The high-risk areas are: severe acute heart disease, severe chronic heart disease, pulmonary disease, renal disease, severe trauma, sepsis, stroke, cancer, and GI catastrophes. Low-risk problems are gynecological disease, urological disease, orthopedic conditions, low-risk heart disease, gastrointestinal disease, and ophthalmologic diseases. The information has been released to hospitals, and the hospitals will have 30 days to supply additional information. If the information submitted is not greater than three pages, it will be published unedited. The only things that would be deleted would be patients' names or physicians' names. Hospitals have been instructed to review the death information and respond if appropriate. If a patient were killed in a car accident on the way home from the hospital, it would be appropriate to include that information in the rebuttal response.

Pending and/or proposed legislation would require that the PROs place an emphasis on education as well as utilization review and quality activity and would extend PRO contracts from two years to three years. One piece of legislation would remove beneficiary liability for deductibles when admissions were denied. Other legislation would require the PROs to consider social factors in determining the necessity of admission.

One Physician's Opinion

Dr. Otis Bowen, a family physician and Secretary of Health and Human Services, and Dr. William Roper, a pediatrician and Administrator of the Health Care Financing Administration, are sensitive to the concerns of the busy practicing physician. They have been able to temper some of the changes being championed by special interest groups and some bureaucrats. Without their guidance, the scope of peer review activities would have been drastically enlarged. Patients and physicians would have been subjected to review that would have further damaged the physician-patient relationship and diminished the quality of health care provided to Americans.

Nothing is certain except death, taxes, and changes in the health care delivery system.

Pediatric Allergy Pitfalls

January 12, 12:30 p.m. Presented by J. Tennyson Howell, M.D. Sponsored by AHEC - Fort Smith. Sparks Regional Medical Center, Medical Library. 1 Category I credit hour.

Methods of Giving Comfort and Feeling of Care to the Scared Hospital Patient

January 13, 12:30 p.m. Presented by Wendell Ross, M.D. Sponsored by AHEC - Fort Smith. Sparks Regional Medical Center, Medical Library. 1 Category I credit hour.

Parenteral Feedings

January 14, 12:00 noon. Presented by Mary Gress, R.D. Sponsored by AHEC - Fort Smith. Sparks Regional Medical Center, 7th Floor Dining Room. 1 Category I credit hour.

Anxiety: Patient and Physician

January 16, 8:30 a.m. - 2:00 p.m. Presented and sponsored by Baptist Medical Center. Baptist Medical Center, Shuffield Auditorium. Fee: \$25, physicians; \$15, other health care professionals. 3.75 Category I and AAFP credit hours. 3.75 contact hours for nurses.

Vertigo

January 18, 6:00 p.m. Sponsored by Memorial Hospital, North Little Rock. Memorial Hospital Dining Room. 1 Category I credit hour.

Drug Interactions

January 19, 12:30 p.m. Presented by Charles Marsh, Pharm D. Sponsored by AHEC - Fort Smith. Sparks Regional Medical Center, Medical Library. 1 Category credit hour.

Complications of Myocardial Infarction

January 21, 12:30 p.m. Presented by Dr. Rowland P. Vernon. Sponsored by AHEC - Fort Smith. Sparks Regional Medical Center, Medical Library. 1 Category I credit hour.

Management of the Poisoned Patient

January 22, 12:30 p.m. Presented by Henry Simmons, Department of Toxicology, UAMS. Sponsored by

AHEC - Fort Smith. Sparks Regional Medical Center, Medical Library. 1 Category I credit hour.

Calcium Channel Blockers

January 28, 6:30 p.m. - 9:00 p.m. Presented by Ray Gifford, M.D., Cleveland Clinic. Sponsored by AMI National Park Medical Center, Hot Springs. AMI National Park Medical Center. Dinner included. Two Category I credit hours.

Cholesterol, Fat Controlled Diets

January 28, 12:00 noon. Presented by Betty Quitt, R.D. Sponsored by AHEC-Fort Smith. Sparks Regional Medical Center, 7th Floor Dining Room. 1 Category I credit hour.

Infectious Disease Update

February 15-16, 8:00 a.m. - 12 noon. Presented by Terry Yamauchi, M.D., Russell W. Steele, M.D.; Richard F. Jacobs, M.D.; Robert Glenn, M.D.; and A. Wesley Burks, M.D. Sponsored by Arkansas Children's Hospital and co-sponsored by UAMS Continuing Education for Physicians. The Sheraton Hot Springs Lakeshore Resort, Hot Springs. Eight Category I credit hours. Fee: \$80.00. For further information contact; Blanche Moore, Arkansas Children's Hospital, 800 Marshall, Little Rock, Arkansas 72202; (501) 370-1481.

How to Handle PID in the Office

February 17, 13:30 p.m. Presented by Dr. Wendell Ross. Sponsored by AHEC - Fort Smith. Sparks Regional Medical Center, Medical Library. 1 Category I credit hour.

Malignant Esophageal Disease

February 18, 12:30 p.m. Presented by Dr. Leon P. Woods. Sponsored by AHEC - Fort Smith. Sparks Regional Medical Center, Medical Library. 1 Category I credit hour.

Beta Blockers vs. Calcium Channel Blockers

February 23, 12:30 p.m. Presented by Charles Marsh, Pharm D. Sponsored by Area Health Education Center (AHEC) - Fort Smith. Sparks Regional Medical Center, Medical Library. 1 Category I credit hour.

Recurring Education Programs

EL DORADO - AHEC

Behavioral Sciences Conference, first and fourth Friday, 12:15 p.m., AHEC - South Arkansas.
Chest Conference, third Wednesday, 12:30 p.m., Warner Brown Hospital
Fracture Conference, third Tuesday, 12:15 p.m., AHEC-South Arkansas
Gynecology-Pathology Conference, second Friday, 12:15 p.m., AHEC-South Arkansas
Internal Medicine Conference, first, second and fourth Wednesday, 12:15 p.m., AHEC-South Arkansas
Pathology Conference, second Tuesday, 12:15 p.m., AHEC-South Arkansas
Pharmacology Conference, second Thursday, 12:15 p.m., AHEC-South Arkansas
Obstetrics-Gynecology Conference, fourth Thursday, 12:15 p.m., AHEC-South Arkansas
Surgical Conference, first, second and third Monday, 12:15 p.m., AHEC-South Arkansas
Tumor Clinic, fourth Tuesday, 12:15 p.m., AHEC-South Arkansas

FAYETTEVILLE - AHEC NORTHWEST

City Hospital Staff Meeting, second Friday, 12:00 noon, Fayetteville City Hospital
Medicine Teaching Conference, first, third and fifth Thursday, 1:00 p.m., AHEC - NW, 241 W. Spring, Fayetteville
Nephrology Lecture Series, fourth Thursday, 12:30 p.m., AHEC- NW, 241 W. Spring, Fayetteville
Rheumatology Lecture Series, first Tuesday, 12:30 p.m., VA Medical Center.

FAYETTEVILLE - VA MEDICAL CENTER

Medical Conference (varying topics), each Wednesday, 12:15 p.m., 3A Conference Room
Pathology/Mortality Conference, each Friday, 12:30 p.m., 3A Conference Room

FORT SMITH-AHEC

Cardiology Conference, first Wednesday, 12:00 noon, Sparks Regional Medical Center, 4th Floor Conference Room
Neurology Conference, second Thursday, 12:30 noon, Sparks Regional Medical Center, Medical Library

HOT SPRINGS-AMI NATIONAL PARK MEDICAL CENTER

Continuing Medical Education Luncheon for Medical/Dental Staff, varying topics, second and fourth Friday, 12:30 p.m., Classrooms, AMI National Park Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, first and third Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Annex Building
Arkansas Methodist Hospital CME Conference, last Friday, 7:00 a.m., Arkansas Methodist Hospital, Paragould
Cherokee Village Tumor Conference, third Monday, 6:00 p.m., Ozark Baptist Memorial Hospital, Cherokee Village, every four months.
Chest Conference, fourth Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room
Independence County Medical Society, second Tuesday, 7:30 p.m., White River Medical Center, Batesville
Interesting Case Conference, second and fifth Tuesday, when applicable, 12:00 noon, St. Bernard's Dietary Conference Room
Kennett Tumor Conference, second Tuesday (every other month), 12:00 noon, Twin Rivers Regional Medical Center, Kennett, Mo.
Methodist Hospital of Jonesboro CME Staff Conference, second Tuesday, 7:30 p.m., Cafeteria, Methodist Hospital of Jonesboro
Monthly Medical Lecture Series, third Tuesday, 7:30 p.m., rotates each month between Walnut Ridge and Pochontas
Neuroradiology Conference, second Friday, 12:00 noon, Stroud Hall, St. Bernard's Annex Building.
Newport Tumor Conference, second Wednesday, 12:00 noon, rotates each month between Harris Clinic and Newport Hospital
Perinatal Conference, second Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Piggott Tumor Conference, third Wednesday, 12:00 noon, Piggott Hospital, every four months.
Poplar Bluff Tumor Conference, third Wednesday, 12:00 noon, Lucy Lee Hospital, Poplar Bluff.
Tumor Conference, fourth Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Wynne Tumor Conference, third Monday, 6:00 p.m., Grecian Steak House, Wynne, every four months.

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Alternating Sub-Specialty Conference, third Wednesday, 12:00 noon, Second Floor Classroom
General Pediatrics Seminar, first and third Friday, 12:00 noon, Second Floor Classroom
Genetics Conference, each Wednesday, 12:00 noon, Sturgis Building, Room 457
Infectious Disease Conference, second Wednesday, 12:00 noon, Sturgis Building, Room 121
Metabolic Neurology Conference, first Wednesday, 1:00 p.m., Polly R. Thomas Conference Room
Pediatric Grand Rounds, each Tuesday, 8:00 a.m., Sturgis Building, Auditorium
Pediatric Neuropsychiatry Conference, second Wednesday, 1:30 p.m., Polly R. Thomas Conference Room
Pediatric Neuroscience Conference, first Thursday, 8:00 a.m., Second Floor Classroom
Pediatric Pathology Conference, first Wednesday, 12:00 noon, Second Floor Classroom
Pediatric Pharmacology Conference, fifth Wednesday when applicable, 12:00 noon, Second Floor Classroom
Pediatric Radiology Conference, first and third Thursday, 12:00 noon, Second Floor Classroom
Pediatric Research Conference, third Monday, 12:00 noon, Second Floor Classroom
Problem Case Conference, second and fourth Friday, 12:00 noon, Second Floor Classroom

LITTLE ROCK-ST. VINCENT INFIRMARY

Cancer Conference, first Wednesday, 12:00 noon, CARTI Auditorium. A meal is provided.
Cancer Conference, third and fourth Thursday, 12:00 noon, Room S1174K, Lab. A meal is provided.

General Medicine Journal Club, each Tuesday, 12:00 noon, Medical Affairs Conference Room. Bring your lunch.
Hematology-Oncology Conference, second Thursday, 12:00 noon, Laboratory Library. A meal is provided.
Interhospital Urology Grand Rounds, first Tuesday, 5:30 p.m., Maumelle Room. Refreshments are provided.
Neuropathology Conference, third Tuesday, 5:00 p.m., Room S1174K, Laboratory. Refreshments are provided.
Pediatric Conference, first Tuesday, 12:30 p.m., Maumelle Room. A meal is provided.
Peripheral Vascular Disease Conference, third Tuesday, 6:00 p.m., Maumelle Room. A meal is provided.
Pulmonary Conference, second and fourth Wednesday, 12:00 noon, DeSoto Room. A meal is provided.

LITTLE ROCK-UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

ACRC/CARTI Tumor Conference, each Wednesday, 12:00 noon, CARTI, Markham & University
ACRC Oncology Forum, fourth Thursday, 4:00 p.m., UAMS Education Building, Room G137
Anesthesia Conference Series, each Wednesday, 4:00 p.m., UAMS Education Building, Room G/110 A&B
Anesthesia Lecture Series, each Wednesday and Thursday, 4:00 p.m., UAMS Education Building, Room G/110 A&B
Anesthesia Morbidity and Mortality Conference, each Tuesday, 6:45 a.m. (Wednesday afternoon only during last week of the month at 4:00 p.m.), UAMS Education Building, Room G/110 A&B
Interdisciplinary Gynecologic Cancer Conference, each Friday, 12:30 p.m., UAMS Education Building, Room G106 A&B
Medicine Grand Rounds, each Thursday, 12:15 p.m., UAMS Shorey Auditorium.
Medicine Research Conference, each Tuesday, 8:00 a.m., UAMS Shorey Building Room 8/105
Neurology Clinical Case Conference, three Thursdays per month, 8:00 a.m. Rotates between UAMS (7D33) and LRVAMC (3S) and ACH.
Neuropathology Conference, every Tuesday, 4:00 p.m. Rotates between UAMS (Shorey Building, 4th floor) and LRVAMC (Autopsy Room).
Neuroscience Conference (Basic), second, third, and fourth Monday, 8:00 a.m., UAMS 7D33.
Ob/Gyn Grand Rounds, each Wednesday, 7:30 a.m., UAMS Education Building, Room G/131B
Ophthalmology Problem Case Conference, each Thursday, 4:00 p.m., UAMS AAC Eye Clinic, Room 3/150.
Orthopaedic Bibliography Conference, each Tuesday, 8:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Fracture Conference, each Tuesday, 7:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Grand Rounds, each Tuesday, 10:00 a.m., UAMS Education Building, Room B/135
Psychiatry Grand Rounds, each Friday, 11:00 a.m., UAMS Shorey Auditorium
St. Vincent Urology Grand Rounds, first Tuesday, 5:30 p.m., St. Vincent Infirmary, Education Building Room 159
Surgery Grand Rounds, each Monday, 5:00 p.m., UAMS Education Building, Room G/141A
Surgery Morbidity and Mortality Conference, each Wednesday, 5:00 p.m., UAMS Education Building, Room G/131A.
Surgery Review Conference, each Monday, 6:00 p.m., UAMS Education Building, Room G/141A
Urologic Topics (Resident Presentation), once or twice monthly, 5:00 p.m., UAMS
Urology Grand Rounds, twice monthly, 5:00 p.m., VAMC
Urology Morbidity and Mortality Workshop, last Wednesday, UAMS
Uro-Radiology Workshop (Urologic Imaging), first Thursday, 5:00 p.m., UAMS
VA Medical Service Teaching Conference, each Thursday, 8:00 a.m., VAMC, Room 2D109
VA Physical Medicine and Rehab Grand Rounds, fourth Friday, 11:00 a.m., NLRVA Building 89 Conference Room or Arkansas Rehab Institute
VA Surgery Grand Rounds, each Thursday, 12:45 p.m., VAMC, Room 2D109
VA Topics in Rehabilitation Medicine, each Thursday, 7:45 a.m., NLRVA Conference Room, Building 89L
VA Weekly Cancer Conference (Surgical Service), each Tuesday, 1:00 p.m., VAMC, Room 2D109

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, third Thursday, 7:00 a.m., Conference Room 1
Grand Rounds Conference, each Wednesday, 12:00 noon, Conference Room 1. Lectures and Case Presentations. A light lunch will be served
Pathology Conference, third Tuesday, 3:00 p.m., Pathology Library. Case Presentations.
Pulmonary Conference, each Tuesday, 12:00 noon, Shuffield Auditorium. Lunch served for \$2.50.
Surgery Conference, each Thursday, 7:30 a.m., Shuffield Auditorium. Lectures and Case Presentations.

PINE BLUFF-AHEC

Behavioral Science Conference, each Thursday, 12:30 p.m., Jefferson Regional Medical Center
Chest Conference, second and fourth Friday, 12:30 p.m., Jefferson Regional Medical Center
Family Practice Conference, fourth Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Internal Medicine Conference, second and fourth Wednesday, 12:30 p.m., Jefferson Regional Medical Center
Obstetrics/Gynecology Conference, second Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Pediatric Conference, third Wednesday, 12:30 p.m., Jefferson Regional Medical Center
Radiology Conference, third Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Southeast Arkansas Medical Lecture Series, third Tuesday, 6:30 p.m., Rosswood County Club. Dinner meeting.
Sub-Specialty Conference, first Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Surgery Conference, first Wednesday, 12:30 p.m., Jefferson Regional Medical Center

TEXARKANA-AHEC

Chest Conference, third Wednesday, 12:30 p.m., St. Michael Hospital
Tumor Conference, first Wednesday, 7:00 a.m., St. Michael Hospital

As organizations accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the organizations named certify that these continuing medical education activities meet the criteria for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

You Can Help Save Lives . . .



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. . . Like Shane's

Just look how far Shane has come in three short years. St. Jude has given him another chance at life and people like yourself helped to make it possible.

Fighting cancer is a painful ordeal, and there are no certainties that Shane will not relapse. But Shane is alive and healthy and doing the things boys his age like to do. And as long as St. Jude has the support of a caring public, there will be hope for children like Shane.



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FAMILY PHYSICIANS UNVEIL STOP SMOKING PROGRAM

Family physicians around the country are receiving a new Stop Smoking Kit developed by the American Academy of Family Physicians (AAFP), in the kick-off of the Academy's major initiative to help its members encourage and assist their patients to stop smoking.

The program was developed to help physicians tell their patients how to stop smoking and to help them do so by providing a concrete program of planned activities. The kit includes a medical history form, a contract to stop smoking, doorknob hangers that read, "Beware: Family Member Involved in Stop Smoking Effort" and "Approach with Respect/Devout Quitter Within". Also included are two pamphlets, "How much do you know about smoking?" and "How your family physician can help you stop" as well as other materials.

To educate and encourage physicians, the Academy conducted continuing medical education programs on smoking cessation at its recent annual Scientific Assembly and is now conducting regional CME programs.

The material developed specifically for doctors instructs them to analyze a patient's personal smoking habits to determine the best method to break them; to counsel patients in how to prepare to stop smoking; and to help patients learn to avoid or deal with situations that tempt them to smoke. Kit materials include flow charts and stickers for physicians to identify and track the progress of patients they are treating. An office manual for the physician and patient education materials for use at home and in the office are also included.

CATASTROPHIC COVERAGE

By a vote of 86 - 11, the Senate recently passed a version of H.R. 2470, the Medicare catastrophic health coverage bill. The bill, which is similar to the House-passed catastrophic bill, would limit a Medicare beneficiary's liability for all covered expenses to \$1,700 per year indexed for inflation. Beneficiaries would be liable for a maximum of one hospital deductible per year and would not be responsible for any cost-sharing for inpatient hospital services beyond the hospital deductible. Skilled nursing facility cost-sharing would be limited to 15% of the national average allowable SNF per day cost for up to ten days in each calendar year. SNF coverage

would be expanded to a maximum of 150 days per year and the three-day prior hospitalization requirement would be eliminated.

The bill would be financed in part by an across-the-board increase in the part B premium and in part by an income-related premium. Before approving the bill, the Senate added an amendment providing catastrophic outpatient prescription drug coverage. Under the amendment, Medicare would cover 80% of the cost of outpatient drugs after an annual deductible of \$600 indexed to the increase in the average beneficiary's total spending for outpatient prescription drugs. It would also authorize the Secretary of HHS to establish standards for the prescribing, dispensing, and utilization of covered drugs.

SLEEP DISORDERS CENTER ACCREDITED

The Sleep Disorders Center of Baptist Medical Center, which is a part of the hospital's Clinical Physiology Department, has received accreditation by the American Sleep Center Association.

The center is the first such accredited center in a private hospital in Arkansas, and it is one of only 90 such centers in the nation.

The directors of the BMC Sleep Disorders Center are Robert C. Galbraith, M.D. and James R. Phillips.

AIDS-RELATED EYE DISEASE HELPED BY NEW DRUG DELIVERY METHOD

An antiviral drug, ganciclovir, injected directly into the eyes of AIDS patients seems to help in controlling cytomegalovirus retinitis (CMV), a blinding eye disease which affects about one-third of AIDS patients.

Ophthalmologist Fred M. Ussery III, M.D., a clinical instructor at Baylor College of Medicine, injected ganciclovir into 14 eyes (intravitreal delivery) of 11 patients with severe CMV retinitis. The drug suppressed the infection in 11 eyes, with 3 eyes showing no signs of improvement. Ganciclovir works by preventing the blinding lesions associated with the disease and possibly helps in controlling infections that have spread to other vital organs.

"Intravitreal ganciclovir was well-tolerated with none of the side effects associated with systemic ganciclovir treatment," said Dr. Ussery. "We didn't see the prob-

lems normally encountered with ganciclovir, such as low white blood cell counts or a weakening of the immunosuppressive characteristics of the patients' bone marrow, which would leave them susceptible to other life-threatening infections."

Successful treatment for CMV retinitis has become more difficult as an increasing number of AIDS patients take AZT (azidothymidine), the only antiviral drug that appears to have any effect on the progression of AIDS.

The Food and Drug Administration prohibits the systemic delivery of both AZT and ganciclovir simultaneously because the two powerful drugs cause the same harmful side effects. As a result, physicians and patients maintain a balancing act, treating the entire body with AZT until the CMV retinitis worsens, then halting AZT treatment temporarily so ganciclovir can be given to prevent the eye lesions. The cycle then repeats itself. But the injection of ganciclovir directly into the eye prevents the drug from spreading to the rest of the body because the eye is a natural blood barrier system.

The FDA has given permission for delivery of this treatment on a "compassionate plea" basis, meaning that the hazards of not receiving dual drug therapy outweigh the risks of possible side effects. The injections are given twice a week on an outpatient basis.

Although ganciclovir has proven to stop the progression of CMV retinitis, the live virus is not eradicated from the eye. When treatment is halted, the disease reappears within two weeks and continues its progression to blindness.

DATA BANK DISCLOSURE AMENDED

The Health Care Quality Improvement Act, PL 99-660, has been amended to eliminate broad access by malpractice attorneys to physician data bank information.

The data bank contains information on adverse licensure decisions, malpractice settlements and judgments, and adverse staff privilege decisions. Under the original version of the Act, information in the data bank would have been disclosed to parties bringing medical malpractice actions.

The amended provision allows disclosure to plaintiffs' attorneys only where a hospital has failed to consult with the data bank and is therefore held responsible for its failure if adverse information would have been disclosed to the hospital.

The amendment was passed by an overwhelming majority in both the House and Senate as part of a package amending the Public Health Service Act. Last minute objections to House passage were raised by the Office of Management and Budget (OMB), claiming that the amendment would "unduly restrict the flow of information to people interested in ensuring quality health care."

The AMA, in cooperation with the Federation of State Medical Boards (FSMB), has submitted a bid to operate the data bank. A contract award will not be made until Congress appropriates funds for the activity.

The Public Health Service Amendments now go to the President where a veto is possible but unlikely.

NEWSMAKERS

Dr. Cornelia M. Beck, professor of nursing and assistant professor of psychiatry and behavioral sciences at the University of Arkansas for Medical Sciences has received the Geriatric Mental Health Academic Award for \$142,000. The grant will allow Dr. Beck to develop research in the area of mental health and aging.

A drug education project funded by a \$180,000 award from the U. S. Department of Education has been awarded to **Dr. Michael Young**, associate professor of health education at the University of Arkansas, Fayetteville.

Lloyd H. Plemmons, M.D., a general practitioner, has joined the staff of Bull Shoals Community Hospital and is in practice at Bull Shoals Hospital Clinic. Dr. Plemmons moved to Bull Shoals from Cherokee Village.

Dr. Jack Alston and **Dr. Dale Clemens** spoke recently at the Siloam Springs Memorial Hospital's For Adults Only series. Dr. Alston, a general surgeon, and Dr. Clemens, a family practitioner, spoke about "Cancer: What You Can Do About It."

The South Arkansas Professional Education Committee presented its sixth annual Cancer Symposium recently. Among the AMS members participating were **Dr. Srinivasan, Dr. Moises A. Menendez**, and **Dr. Joseph Beck**.

Dr. Gary Goza, a Jonesboro neurologist, recently participated in the organizational meeting of the Northeast Arkansas Parkinson's Disease Support Group at St. Bernard's Regional Medical Center. The purpose of the meeting was to form a network of assistance for individuals suffering from Parkinson's and his or her family.

NEW MEMBERS

CRAIGHEAD-POINSETT COUNTY MEDICAL SOCIETY

Ryals, Rickey O., Pathology, Jonesboro. Born December 29, 1956, Jonesboro, LA. Pre-medical education, Louisiana Tech University, 1978. Medical education, LSU School of Medicine, 1982. Residency, University of Arkansas for Medical Sciences. Board certified. Member, ASCP and CAP.

GARLAND COUNTY MEDICAL SOCIETY

Queen, George P., Family Practice, Hot Springs. Born, July 30, 1962, Port Arthur, TX. Pre-medical education, University of Arkansas, B.S., 1957. Medical education, University of Arkansas for Medical Sciences, 1962. Internship, Baptist Hospital, Memphis, TN. Military record, U. S. Marine Corp. Practice experience, Hot Springs, 24 years. Board certified.

JEFFERSON COUNTY MEDICAL SOCIETY

Ridling, Ann T., Family Practice, Pine Bluff. Born September 21, 1958, Pine Bluff. Pre-medical education, Hendrix College, B.A., 1980. Medical education, University of Arkansas for Medical Sciences, 1984. Residency, AHEC - Pine Bluff. Board eligible.

Watson, Kirk D., Family Practice, Pine Bluff. Born December 17, 1956, Benton. Pre-medical education, Hendrix College and University of Arkansas, Fayetteville, B.S. 1979. Medical education, University of Arkansas for Medical Sciences, 1983. Residency, AHCE - Pine Bluff. Board certified.

OUACHITA COUNTY MEDICAL SOCIETY

Brunson, Milton E., Obstetrics/Gynecology, Camden. Born, April 19, 1947, Searcy. Pre-medical education, University of Arkansas at Little Rock, B.A. 1974 and 1976. Medical education, University of Arkansas for Medical Sciences, 1980. Residency, UAMS. Military record, U. S. Air Force, 1966-1970. Practice experience, Camden, 2 years. Board eligible. Member, AMA, American College of Ob/Gyn.

SEVIER COUNTY MEDICAL SOCIETY

Buffington, Michael L., Family Practice, DeQueen. Born, December 30, 1942, Newport, AR. Pre-medical education, University of Arkansas, 1964. Medical education, University of Arkansas for Medical Sciences, 1968. Internship, Presbyterian Medical Center, Denver, CO. Military record, U. S. Air Force. Practice experi-

ence, DeQueen, 16 years; Magnolia, 6 months. Teaching appointments, UAMS Medical Center. Chief of Staff, DeQueen General Hospital, 1978 and Community Hospital, DeQueen, 1987. Board certified.

UNION COUNTY MEDICAL SOCIETY

Ray, Robin, P., Pediatrics, El Dorado. Born April 19, 1948, Hugo, OK. Pre-medical education, Oklahoma State University, B.S., 1973. Medical education, University of Texas Health Science Center, 1977. Residency, Ohio State University. Practice experience, Brownwood, TX, 11 years; El Dorado, 2 years. Board certified.

WASHINGTON COUNTY MEDICAL SOCIETY

Khan, Masood N., Cardiology, Fayetteville. Born, March 31, 1945, India. Pre-medical education, Nizam Government Science College, 1963. Medical education, Osmania Medical College, Hyderabad, India, 1972. Internship, Capitol Hill Hospital, Washington, D.C. Residency, D. C. General Hospital, Washington, D.C. Practice experience, Fayetteville V. A. Medical Center, 4 years. Teaching appointments, Assistant Clinical Professor, UAMS. Fellow, Hematology/Oncology and Cardiology. Board eligible.

RESIDENT MEMBERS

Anding, Brian S., Ophthalmology. Born November 8, 1959, Dallas, TX. Pre-medical education, Texas A & M University, B. s., 1982. Medical education, Southwestern Medical School, Dallas, 1986. Internship, Baylor University Medical Center.

Felts, Larry S., Psychiatry. Born July 24, 1954, Little Rock, AR. Pre-medical education, Arkansas State University, Jonesboro, B.S., 1976. Medical education, UAMS, 1984. Internship, UAMS.

Lefler, Stephen F., Ob/Gyn. Born February 8, 1959, Morrilton. Pre-medical education, Hendrix College, B.A. 1981. Medical education, UAMS, 1986. Internship, AHEC - Pine Bluff.

Logan, James W., Internal Medicine. Born October 27, 1959, Marysville, CA. Pre-medical education, Louisiana Tech University, B. S. 1982. Medical education, LSU, Shreveport, 1987. Internship, UAMS.

Lyle, Carlene W., Psychiatry. Born December 28, 1952, Sallisaw, OK. Pre-medical education, University of Texas, Arlington, B.S.N., 1978. Medical education, University of Texas, San Antonio, 1986. Internship, UAMS.

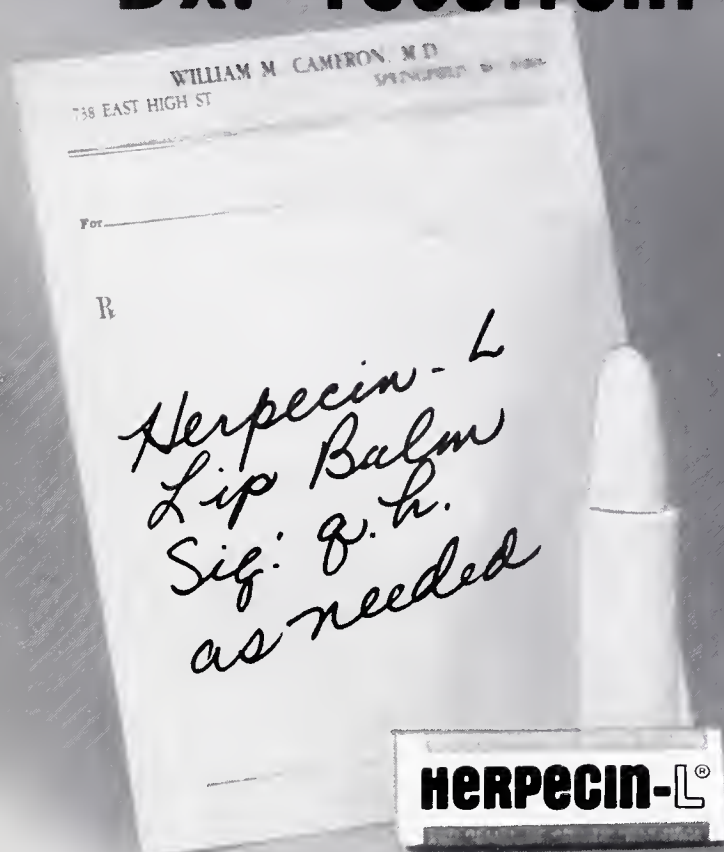
Miers, Jane F., Pediatrics. Born November 3, 1960, Great Bend, KS. Pre-medical education, University of Texas, Irving, B. S. 1983. Medical education, Southwestern Medical School, 1987. Internship, University of Arkansas for Medical Sciences.

Wait, Gerald M., General Surgery. Born May 26, 1954, Washington, D.C. Pre-medical education, Univer-

sity of Texas, Arlington, B.S., 1982. Medical education, University of Texas Health Sciences Center and Southwestern Medical School, 1987.

Wilson, Mark Matthew. Born June 23, 1961, Shreveport. Pre-medical education, Louisiana Tech University, Ruston, B.S., 1983. Medical education, Louisiana State University, Shreveport, 1987.

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ATTENTION TO ALL ARKANSAS MEDICAL SOCIETY MEMBERS

The Roster of the Arkansas Medical Society for 1987 follows. The roster lists members alphabetically and by county.

A Directory of Members will be published in July, 1988 and will include addresses, telephone numbers, and type of speciality as well as other sources of information for medical society officers, state and federal agencies.

**LOOK FOR YOUR ARKANSAS MEDICAL SOCIETY DIRECTORY IN
JULY, 1988.**

ARKANSAS MEDICAL SOCIETY ROSTER OF MEMBERSHIP AS OF NOVEMBER 25, 1987

- Deceased

ARKANSAS

Burleson, Stan W.
Daniel, III, Noble B.
Guyer, G. L.
Hestir, John M.
John, Jr., Milton C.
McCracken, Elbert A.
Millar, Jr., Paul H.
Morgan, Jerry D.
Northcutt, Carl E.
Pritchard, Jack L.
Rasco, Jr., Charles W.
Speer, Jr., Hoy B.
Speer, Marolyn N.
Wellborn, Jr., James C.
Wood, Gary P.
Yelvington, Dennis B.

Clarke, James S.
Condrey, Yoland M.
Cook, James T.
Croom, James C.
DeLany, Clarence L. #
Dixon, Gerald R.
Dunbar, James C.
Dykstra, Peter C.
Fontenot, Jr., Edwin
Fonticiella, Adalberto
Guenthner, John F.
Hardin, Philip R.
Johnson, Stacey M.
Kelley, Lawrence A.
Kerr, Robert L.
Knox, Thomas E.
MacKercher, Peter A.
Massey, James Y.
McGaughey, Allen S.
Peden, Robert G.
Plant, Richard F.
Roberts, David H.
Sneed, Jr., John W.
Trager, Marc H.
Tullis, Joe M.
Wilbur, Paul F.
Wilson, Jack C.

Benjamin, George
Bledsoe, James H.
Boozman, III, Fay W.
Carter, Vernon H.
Christman, Daniel E.
Claytor, Tonya C.
Clemens, R. Dale
Clower, John D.
Cohagan, Donald L.
Cole, Randall E.
Compton, Neil E.
Costaldi, Mario E.
Dang, Minh-Tam
Dean, Lee A. #
Denman, David A.
Diacon, W. Lindley
Donnell, Robert W.
Drange, R. Kirk
Elkins, James P.
Fioravanti, Bernard L.
Garrett, III, David C.
Goss, Stephen L.
Hackler, Keith
Hall, David C.
Harmon, Harry M.
Henderson, Oscar L.
Hitt, Jerry L.
Hof, C. William
Hoffman, Carl E.
Holder, Robert E.
Horner, Glennon A.
Howard, K. Lamar
Howard, Jr., Willard H.
Hull, Robert R.
Huskins, James D.
Huskins, John A.
Jacks, John W.
Jennings, William E.

Kendrick, Carl M.
Knapp, James R.
Martin, Jr., Albert E.
McCollum, Edward N.
McCollum, William E.
McKnight, William D.
Miles, Richard W.
Moose, John I.
Mullins, Neil D.
Neaville, Gary A.
Panettiere, Frank J.
Pappas, John J.
Pearson, Richard N.
Pickens, James L.
Platt, Michael R.
Puckett, Billy J.
Reese, Michael C.
Ritz, Ralph C.
Robbins, Robert H.
Rolniak, Wallace A.
Ronald, Douglas C.
Steadman, Jr., Hunter M.
Stinnett, Charles H.
Stone, W. Tex
Swaim, Terry J.
Swindell, William G.
Tucker, David J.
Turley, Jan T.
Waldon, Gene B.
Warren, Grier D.
Weaver, Donald D.
Weaver, Robert H.
Wright, Larry D.

ASHLEY

Burt, Frederick N.
Edwards, Lawrence E.
Garcia, Luis F.
Gresham, Edward A.
Karrot, Abraham
McLean, Joseph A.
Ripley, Curtis E.
Thompson, Barry V.
Toon, D. L.
Walsh, Benjamin J.

BENTON

Addington, Alfred R.
Adrian, James A.
Allen, L. Barry
Allen, William M.
Arkins, James H.
Atkinson, Thomas W.
Ball, Eugene H.
Becton, Jr., Paul

BAXTER

Baker, Robert L.
Chatman, Ira D.
Cheney, Maxwell G.
Chock, Daniel P.
Chock, Helga E.

BOONE

Ashford, Walter P.
Bell, Thomas Edward

Bennett, Joe D.
Carter, J. Brad
Chambers, III, Carlton L.
Daniel, Charles D.
Ferguson, Noel F.
Fowler, Ross E.
Garland, Jr., William J.
Gladden, Jean C.
Hoherock, Thomas R.
Hudson, William A.
Jennings, Larry B.
Kirby, Henry V.
Klepper, Charles R.
Langston, Robert H.
Laule, Alice Geary
Ledbetter, Charles A.
Leslie, Thomas S.
Mahoney, Jr., Paul L.
Maris, Mahlon O.
Rozeboom, Victor A.
Scroggins, Sam J.
Simpson, Thomas J.
Smith, H. Van
Troupe, John T.
Vowell, Don R.
Williams, Rhys A.
Wilson, Joe B.

BRADLEY

Chambers, F. David
Marsh, James W.
Pennington, Kerry F.
Schultz, Wayne H.
Whaley, Jr., William C.
Wharton, Joe H.
Wynne, George F.

CARROLL

Beard, Charles A.
Bubak, Paul J.
Card, Shannon R.
Flake, William K.
Green, Jr., Jess D.
Stensby, Harold F.
Taylor, Richard L.
Wallace, Oliver

CHICOT

Alexander, Lester T.
Berry, Danny T.
Burge, John P.
DeRamos, Agapito Y.
Heder, Guy W.
Russell, John R.
Smith, Major E.
Thomas, H. W.
Tuangsithanon, T.
Tvedten, Tom
Vichugsananon, Niponth
Vogel, Wrede E.
Weaver, William J.
Wilson, Thomas C.

CLARK

Anderson, P. R.
Balay, John W.

Blackmon, James T.
Clark, Charles G.[#]
Dorman, Robert A.
Kennedy, J. W.
Taylor, George D.
Toombs, Vernon L.

CLEBURNE

Baldrige, Max
Barnett, James C.
Barnett, Michael E.
Beasley, Harold
Campos, Amador C.
Eans, Thomas L.
Hinkle, Richard A.[#]
Oakley, Nita B.
Poff, Joseph H.
Poff, Nathan L.

COLUMBIA

Alexander, Sr., John E.
Alexander, Jr., John E.
Baldwin, Ronald L.
Evans, Matthew L.
Farmer, John M.
Griffin, Rodney L.
Hester, Joe D.
Hunter, Jr., Robert W.
Kelley, Charles W.
McMahen, H. Scott
Murphy, Fred Y.
Pullig, Thomas A.
Roberts, Franklin D.
Ruff, John L.
Strange, Vance M.
Walker, Jack T.
Weber, Charles H.

CONWAY

Hickey, Thomas H.
Hyatt, Benjamin C.
Lipsmeyer, Keith M.
Owens, Gastor B.
Rozzell, Allen R.
Wells, Charles F.

**CRAIGHEAD-
POINSETT**

Alston, Herman D.
Aston, J. Kenneth
Atkinson, Robert C.
Baldrige, John A.
Ball, John F.
Basinger, James W.
Berry, Donald M.
Blachly, Ronald J.
Blanchard, Steven M.
Blaylock, Jerry D.
Bodeker, Larry J.
Bogaev, Leonard R.
Bradley, Jr., James F.
Brown, Mark C.
Buckner, John H.
Burns, Richard G.
Carpenter, Kennan
Clopton, Jr., Owen H.

Cohen, Robert S.
Conn, James Warren
Cook, John
Crawley, Michael E.
Dickson, Glenn E.
Eddington, William R.
Emerson, Steven
Forestiere, A. J.
Garner, William L.
George, F. Joseph
Golden, Stephen C.
Gossett, Clarence E.
Goza, Gary R.
Gray, David P.
Green, W. Robert
Guinn, Donald R.
Guthrie, Alastair N.
Hall, Jr., Ray H.
Herman, Barry K.
Hiers, Connie L.
Hightower, Michael D.
Hill, Roger D.
Hogue, Ernest L.
Hubbard, William S.
Isaacson, Michael L.
James, Frank M.
Jennings, R. Duke
Jiu, John B.
Johnson, Larry H.
Johnson, Roehl W.
Jones, K. Bruce
Jones, R. J.
Jordan, Harry J.
Keisker, Jr., Henry W.
Kemp, Charles E.
Kroe, Donald J.
Lassonde, Robert G.
Lawrence, Jr., Robert O.
Ledbetter, Joseph W.
Lunde, Stephen P.
Lyons, Lewis C.
Mackey, Michael
Maglothlin, Douglas L.
Mahon, Larry E.
McDaniel, Craig A.
McKee, Bobby E.
Mitchell, George E.
Modelevsky, Aaron C.
Montgomery, Earl W.
Moore, Steven M.
Nixon, Jr., D. Allen
Peeler, Malcolm O.
Porter, Revel D.
Price, Edwin F.
Raney, Bascom P.
Reid, E. Paul
Robbins, Robert A.
Roberts, Randy D.
Robinette, James M.
Rodriquez-Conn, Fulvia S.
Rogers, James F.
Rusher, Jr., Albert H.
Sanders, James W.
Sapiro, Gary S.
Saunders, Earnest
Schrantz, James L.
Scriber, Ladd J.
Shanlever, Rufus C.
Shanlever, William T.
Skaug, Warren A.
Smith, Jr., Floyd A.

Smith, Vestal B.
Sparks, Barrett
St. Clair, Jr., John T.
Stainton, Joseph C.
Stainton, Jr., Robert M.
Stallings, Jr., Joe H.
Swingle, Charles G.
Taylor, Robert D.
Tedder, Michael E.
Teply, Joseph F.
Thomas, J. Fred
Tonymon, Kenneth
Tullis, Gene
Utlely, Phillip M.
Verser, Joe
Vollman, Jr., Don B.
Webb, James W.
White, Anthony T.
Wiggins, H. Lynn
Williams, E. Walden
Wilson, Jr., Joe T.
Winters, W. Lee
Wisdom, Garland Durwood
Woodruff, Stephen O.
Yates, Robert L.
Young, Jr., William C.

CRAWFORD

Darden, Lester R.
Edds, Millard C.
Edwards, Henry N.
Gilmore, Owen B.
Hefner, David P.
Jennings, Charles A.
Sasser, III, L. Gordon
Shearer, Francis E.
Sills, D. Bart
Travis, A. Lawrence

CRITTENDEN

Adler, Jr., Justin C.
Arnold, Sidney W.
Bryant, Glen E.
Deneke, Milton D.
Evans, Loraine J.
Ferguson, Edgar S.
Ferguson, T. Murray
Ford, Jr., Robert C.
Gray, Thomas L.
Hamilton, Ralph B.
Haynes, Max G.
Hernandez, Jacinto
Herrington, Jr., C. G. "Cap"
Hodges, John M.
Huffstutter, Paul J.
Jay, III, Gilbert D.
Kennedy, Keith B.
L'Heureux, Guy J.
Lanford, H. G.[#]
Lubin, Milton
Meredith, Jr., Samuel G.
Miller, James L.
Nadeau, Kenneth R.
Peeples, Jr., Chester W.
Pierce, Trent P.
Schoettle, Glenn P.
Schoettle, Steve P.
Shrader, Floyd R.
Smith, Bedford W.

Taylor, Jr., C. Herbert
Uiley, L. Thomas
Webb, Dan W.
Westbrook, H. Wade
Wright, William J.

CROSS

Beaton, J. Trent
Beaton, Kenneth E.
Bethell, Robert D.
Burks, Willard G.
Crain, Vance J.
Hayes, Jr., Robert A.
Jacobs, James R.
Young, John H.

DALLAS

Davis, Paul
Delamore, John H.
Floyd, Mark A.
Howard, Don G.
Nutt, Hugh A.

DESHA

Go, Peter Kong Hua
Harris, Howard R.
Hoagland, Robert A.
Prosser, III, Robert L.
Robinson, Guy U.
Young, James E.

DREW

Binns, Van C.
Busby, Arlee K.
Maxwell, Ralph M.
Price, Jr., Johnnie P.
Wallick, Paul A.
Wilson, Harold F.

FAULKNER

Archer, Jr., Charles A.
Banister, Bob G.
Benafield, Robert B.
Daniel, Sam V.
Furlow, William C.
Garrison, James S.
Gordy, Jr., L. Fred
Hendrickson, Jr., Richard O.
Magie, Jimmie J.
McChristian, Paul L.
Rook, Robert B.
Ross, Rex W.
Shirley, David C.
Smith, John D.
Smith, Lander A.
White, Tommie G.

FRANKLIN

Gibbons, David L.
Jefferson, Christina M.
Jefferson, Thomas C.
Long, C. C.
Smith, John C.

GARLAND

Adams, Frank M.
Aquino, Al
Aspell, Robert W.
Atkinson, Robert H.
Beamer, Lee F.
Bodemann, Michael C.
Bodemann, Stephen L.
Bohnen, Loren O.
Borg, Robert V.
Bracken, Ronald J.
Braley, Richard E.
Braun, James R.
Brunner, John H.
Bumpas, Timothy F.
Burton, Frank M.
Burton, James F.
Campbell, James W.
Cates, Jack A.
Chamberlain, Joe W.
Clayton, Laura F.
Crabtree, John H.
Cupp, III, Cecil W.
Davis, Sheryl L.
Dembinski, T. Henry
Dodson, Jr., John W.
Dunn, Richard W.
Durham, Jr., Thomas M.
Edwards, Gwilym A.
Eisele, W. Martin
English, P. Timothy
Fagan, Marian F.
Finan, E. Michael
Fore, Robert W.
Fotioo, George J.
French, James H.
Gardial, J. Richard
Gardner, James L.
Garner, Onyx P.
Gocio, Allan C.
Graham, Richard F.[#]
Griffin, James E.
Haggard, John L.
Harper, Edwin L.
Harsh, Karen L.
Hechanova, Jr., D. M.
Heinemann, Fred M.
Hill, Robert L.
Hollis, Thomas H.
Howe, H. Joe
Humphreys, Robert P.
Irwin, William G.
Jayaraman, K. K.
Jayaraman, Vilasini D.
Jayasundera, Naomal S.
Johnson, Paulette S.
Johnson, Robert D.
Johnston, Gaither C.
Kaler, Ron A.
Keadle, William R.
Kincheloe, A. Dale
King, Leeman H.
Kleinhenz, Robert W.
Klugh, Jr., Walter G.
Koehn, Martin A.
Krishnan, Bhaktan
Lane, III, Charles S.
Lang, Patricia A.
Lee, William R.
Lewis, Robert L.
Lovell, Clawrence R.

Madsen, II, Henrik
Mahone, J. Kelly
Maruthur, Gopakumar
Mashburn, William R.
McConkie, Stuart B.
McCrary, Sr., Robert F.[#]
McCrary, Jr., Robert F.
McFarland, Louis R.
McMahan, James C.
Meek, Gary N.
Morrison, David R.
Munos, Louis R.
Newton, Doane M.
Pai, Balakrishna V.
Pandit, Sudhir K.
Pappas, Deno P.
Peeples, Raymond E.
Pemmaraju, Seshagirirao
Powell, Brenda N.
Rainwater, W. Sloan
Reddy, Prabhakara K.
Robert, Jon M.
Robertson, Fred T.
Rosenzweig, Joseph L.
Sanders, Hallman E.
Schmidt, Clinton C.
Seifert, Kenneth A.
Shelby, Eugene M.
Shriner, Walter[#]
Shroff, Rajesh K.
Simpson, John B.
Slaton, Catherine R.
Slaton, G. Don
Slezak, James
Smith, Jr., Bruce L.
Smith, John W.
Smith, Phillip L.
Sorrels, John W.
Springer, Jr., Melvin R.
Springer, William Y.
Stecker, Jr., Elton H.
Stecker, Rheeta M.
Stough, III, Dowling Bluford
Thomas, W. Al
Thompson, Jr., Thomas P.
Trieschmann, John W.
Tucker, R. Paul
Wade, Jr., H. King
Wallace, Thomas R.
Walley, Luther R.
Woodward, Philip A.
Wright, Charles C.
Wright, William J.

GRANT

Irvine, Jack M.
Paulk, Clyde D.

GREENE-CLAY

Baker, A. J.
Baker, Clark M.
Boggs, Dwight F.
Bonner, J. Darrell
Cagle, Roger E.
Collier, Jr., George H.
Crow, Asa A.
Duckworth, Hillard R.
Futrell, Junius B.
Hardcastle, R. Lowell

Harper, Bland R.
Hazzard, Marion P.
Hobby, George A.
Jones, Bryant W.
Kemp, Clarence L.
Lawson, J. Larry
Martin, Richard O.
McKelvey, Earle D.
Mitchell, Bennie E.
Mize, James S.
Muse, Jerry L.
Page, Billie C.
Purcell, Donald I.
Richmond, Jack G.
Sellars, John R.
Shedd, Leonus L.
Sheridan, James G.
Shotts, Jr., C. Mack
Shotts, Vern Ann
Smith, Mark M.
Watson, Samuel D.
White, Robert B.
Williams, Dwight M.

HEMPSTEAD

Branch, Sr., James W.
Dodd, N. Leland
Eaton, James M.
Harris, Lowell O.
Holt, Forney G.
Martindale, James G.
McKenzie, Jim
Stevens, David G.
Wright, George H.

HOT SPRING

Bollen, A. Ray
Brashears, Larry B.
Burton, Bruce K.
Clark, Curtis B.
Cobb, Russell W.
Ellis, C. Randolph
Kersh, N. B.
Loyd, Gregory M.
Murphy, Kenneth
Peters, Claude F.
Vaughan, John A.
White, Bruce A.
White, Robert H.

HOWARD-PIKE

Atha, Timothy C.
Gullett, A. Dale
Hearnsberger, John E.
Humphreys, Jr., T. J.
King, Joe D.
Peebles, Samuel W.
Pye, Ted H.
Sykes, Robert R.
Turbeville, James O.
Ward, Hiram T.
White, Phillip L.

INDEPENDENCE

Akin, Charles R.
Allen, James D.

Baker, John R.
 Baker, Robert V.
 Baxley, Paul J.
 Beck, Carl T.
 Bess, Lloyd G.
 Davidson, Dennis O.
 Day, Charles H.
 Goodin, Jr., William H.
 Hays, Sarah F.
 Jones, Edward J.
 Jones, Edward T.
 Ketz, Wesley J.
 Lambert, John S.
 Luter, Dennis W.
 Lytle, Jim E.
 McClain, Jr., Charles M.
 Moody, Lackey G.
 Raney, W. Troy
 Roark, John H.
 Scott, John G.
 Slaughter, Bob L.
 Smith, Bob G.
 Stalker, James M.
 Strickland, Nathan E.
 Taylor, Chaney W.
 Taylor, Charles A.
 Tucker, Charles L.
 Waldrip, III, William J.
 Walton, Robert B.
 Webster, Russell P.
 Zini, James E.

JACKSON

Ashley, Jr., John D.
 Austin, Jr., Lester K.
 Carney, J. W.
 Chauhan, Mufiz A.
 Dudley, III, Guilford M.
 Fisher, Timothy M.
 Foote, John W.
 Frankum, Jr., Jerry M.
 Green, Roger L.
 Harris, M. Haymond
 Hergenroeder, Paul J.
 Jackson, Jr., Jabez Fenton
 Junkin, A. Bruce
 Lopez, Ramon E.
 Poon, Hon K.
 Reynolds, Roland C.
 Williams, Thomas E.
 Young, III, Jack S.

JEFFERSON

Anderson, Charles W.
 Armstrong, Jr., Simmie
 Atkinson, Evangelina C.
 Atnip, Gwyn
 Attwood, H. M.
 Bell, Jr., Carl H.
 Blackwell, Banks
 Bracy, Calvin M.
 Brooks, Jr., R. Teryl
 Buckley, J. Wayne
 Burford, Thomas G.
 Butler, Robert C.
 Campbell, Jr., James C.
 Carlisle, David L.
 Carlton, Irvin L.
 Cheek, Ben H.

Clark, Jr., James F.
 Coker, L. Randle
 Crenshaw, John
 Davis, Charles M.
 Dedman, John D.
 Deneke, William A.
 Devi, Talluri S.
 Fendley, Claude E.
 Fendley, Herbert F.
 Flowers, Martha A.
 Forestiere, Lee A.
 Freeman, William H.
 Frigon, Jacquelyn S.
 Fuller, III, C. James
 Glasscock, Robert E.
 Green, Horace L.
 Green, Linda Haynie
 Gullett, Jr., Robert R.
 Hardin, J. David
 Harper, William F.
 Hegwood, H. Melvin
 Henderson, Francis M.
 Highsmith, Vivian F.
 Hoover, Sherman H.
 Hopkins, Karmen
 Hughes, L. Milton
 Hussain, Shafqat
 Hutchison, E. L.
 Hyman, Carl A.
 Hyman, Carl E.
 Irwin, Jr., Raymond A.
 Jacks, David C.
 James, William J.
 Jenkins, Bobby J.
 Jenkins, Mary Ellen
 Joseph, Aubrey S.
 Justiss, Richard D.
 Kaipa, Siva P.
 Khan, Mahmood A.
 King, Yum Y.
 Langston, Lloyd G.
 Ligon, Ralph E.
 Lim, William N.
 Lindsey, James A.
 Lipscomb, Larry G.
 Lum, Don
 Lupo, David A.
 Mabry, Charles D.
 Martin, Kenneth A.
 Maynard, Ross E.
 McDonald, Robert L.
 McFarland, Mike S.
 Mehta, Shyam P.
 Meredith, William R.
 Miller, Donald L.
 Milligan, Monte C.
 Monroe, Sanford C.
 Morris, Harold J.
 Nixon, David T.
 Nixon, William R.
 Nuckolls, J. William
 Pearce, Malcolm B.
 Pierce, Jr., J. R.
 Pierce, Ruston Y.
 Rainey, William C.
 Raney, Oliver C.
 Reid, Jr., Ishmael S.
 Reid, Loyene B.
 Rittelmeyer, Clarence M.
 Roaf, Sterling A.
 Roberson, Jr., George V.

Rogers, Henry L.
 Ross, Robert L.
 Samuel, Ferdinand K.
 Schuller, Hans
 Shorts, Stephen D.
 Simmons, Calvin R.
 Simpson, Jr., P. B.
 Smith, Paul L.
 Sparrow, Martha A. G.
 Stern, Howard S.
 Sullenberger, A. G.
 Tanner, Ronald D.
 Tisdale, Jr., Alfred D.
 Toatley, Donald U.
 Townsend, Thomas E.
 Tracy, C. Clyde
 Wagnon, William G.
 Waheed, Atiya N.
 Walajahi, Fawad H.
 Waller, Franklin W.
 Watson, Charles
 Watson, Vye B.
 Wilkins, Jr., Walter J.
 Worrell, Jr., Aubrey M.

JOHNSON

McAuley, John R.
 McKelvey, Richard E.
 Patterson, Jack T.
 Pennington, Donald H.
 Shrigley, Guy P.

LAFAYETTE

Ditsch, Craig E.
 Lee, Willie J.
 Patton, Robert C.

LAWRENCE

Hughes, Joe E.
 Joseph, Ralph F.
 Lancaster, Ted S.
 Quevillon, Robert D.
 Smoot, John D.
 Spades, III, Sebastian A.
 Wilson, Stephen K.

LEE

Balke, Susan W.
 Fields, E. C.
 Gray, Dwight W.
 Ly, Duong N.

LITTLE RIVER

Armstrong, James D.
 Peacock, Jr., Norman W.
 Shelton, Jr., Joe G.
 Wade, Billy K.

LOGAN

Baskerville, Jerry R.
 Buckley, Douglas A.
 Chalfant, Charles H.
 Daniel, William R.
 Enns, Wayne P.

Harbison, James D.
 Hutson, III, Sanford E.
 Roberts, William J.
 Smith, James T.
 Ulrich, Guy
 Williams, John R.

LONOKE

Abrams, Joe A.
 Anderson, Leslie F.
 Braswell, Thomas R.
 Chapman, Jerry C.
 Gartman, Joseph F.
 Harris, Willie R.
 Holmes, Byron E.
 Inman, Jr., Fred C.
 Schumann, Gerald M.
 Washburn, C. Yulan

MILLER

Andrews, Jr., A. E.
 Barnes, Jr., Walter C.
 Blankenship, D. Michael
 Brubaker, Lawrence M.
 Burns, Billy R.
 Burroughs, James C.
 Cutler, Otis
 Deskin, Roy L.
 Dodge, John M.
 Druff, Gerald H.
 Duncan, Donald L.
 Eichler, Jr., Edward A.
 Ford, John Suffern
 Fournier, Donald C.
 Gilbert, Arnold
 Gillean, John A.
 Graham, John
 Hall, Eric E.
 Hall, Jon D.
 Harrell, Jr., William B.
 Harris, C. Lynn
 Harrison, Jack W.
 Hillis, Thomas M.
 Hughes, A. Keith
 Hughes, R. Paul
 Hutcheson, Jr., Fred A.
 Jean, Alan B.
 Jones, John W.
 Joyce, Frederick E.
 Kemp, Karlton H.
 Kittrell, James B.
 Leavelle, Ray W.
 Loe, Arlis W.
 Mayo, Russell
 McGinnis, Sr., Robert S.
 Meredith, Paul D.
 Newton, Norris L.
 O'Banion, Dennis
 Osburn, Jr., Roger C.
 Peebles, Larry M.
 Ridout, Jr., Robert M.
 Robinson, John
 Rountree, Glen A.
 Royal, Jack L.
 Shaffer, William L.
 Shipp, G. Carl
 Short, Harold H.
 Smith, Jr., Arnett D.
 Smolarz, Gregory J.

Solomon, J. Alan
Somerville, Patrick J.
Stringfellow, Jerry B.
Thornton, Charles N.
Tompkins, Jr., W. C.
Warren, Jr., William S.
Wilhelm, Frieda
Wren, Herbert B.
Wright, III, James O.
Yarbrough, Charles P.
Young, Mitchell

MISSISSIPPI

Abramson, Lawrence J.
Aviner, Zvi
Bell, Mary C.
Biggerstaff, Jerry R.
Brock, Jr., Charles C.
Campbell, Jr., Charles E.
Canale, James L.
Clewans, Harvey W.
Cole, Cecil R.
Cullom, Sumner R.
Elliott, John Q.
Fenaughty, Francis J.
Fergus, R. Scott
Flannigan, Thomas C.
Friedman, Charles M. #
Hart, Sybil R.
Higley, Jr., George B.
Holcomb, Cecil E.
Hubener, Louis F.
Hudson, James H.
Husted, G. Scott
Jones, Herbert
Melton, Clinton G.
Osborne, Merrill J.
Oster, Catherine J.
Pollock, George D.
Rauls, Stephen R.
Rhodes, R. F.
Russell, James D.
Sammons, Jr., L. C.
Sellers, Kenneth D.
Shaneyfelt, E. A.
Sims, Jr., Hunter C.
Smith, Ronald D.
Workman, W. Wayne

MONROE

David, Jr., Neylon C.
Ewing, Jon R.
Pham, Dac Tat
Pupsta, Benedict F.
Stone, Jr., Herd E.
Walker, Walter L.

NEVADA

Avery, Charles D.
Crow, H. Blake
Hairston, Glenn G. #
Peeples, George R.

OUACHITA

Boone, Max Robert
Braden, Lawrence F.
Dedman, Jr., J. L.

Dedman, William D.
Dobson, Jack T.
Fohn, Charles H.
Guthrie, James
Hout, Judson N.
Jameson, Jr., John B.
Kendall, Jerry R.
Miller, John H.
Nunnally, Robert H.
Ozment, L. V.
Sanders, Cal R.
Thorne, Arthur E.

PHILLIPS

Bell, L. J. Patrick
Berger, Alfred A.
Elovitz, Maurice J.
Faulkner, Henry N.
Kirkman, C. M. T.
McCarty, Charles P.
McCarty, Jr., Gordon E.
McDaniel, Marion A.
Miller, Jr., Robert D.
Paine, William T.
Patton, Francis M.
Rangaswami, Narayanaswami
Vasudevan, Kanaka
Vasudevan, P.
Wise, Jr., James E.

POLK

Fried, David D.
George, Anthony D.
McClard, P. Helen
Mesko, John D.
Rogers, Henry N.
Wood, John P.

POPE

Ashcraft, Ted E.
Austin, Nathan F.
Bachman, David S.
Barton, A. Dale
Battles, Larry D.
Berner, Dennis W.
Birum, Patricia J.
Bost, R. Kingsley
Bradley, Stanley C.
Brown, Charles H.
Burgess, James G.
Carter, James M.
Cloud, Joe A.
Crumpler, Jr., Joe B.
Dunn, Donald L.
Galloway, William W.
Henry, J. Arnold
Hill, Donald F.
Honghiran, Ted
King, John W.
King, Jr., W. Ernest
Kolb, Jr., James M.
Lahr, Charles H.
Lane, Jr., Walter H.
Lawrence, Frank M.
Lovell, Sr., Richard K.
Lowrey, Douglas H.
Lyford, Jr., Joe H.

Malone, George E.
Mauch, E. Jane
May, Jr., Robert H.
Meyer, Kelly H.
Mobley, Max J.
Monfee, Andrew M.
Myers, Gary Dean
Myers, J. Mark
New, Kenneth O.
Riddell, C. Michael
Riley, Don C.
Stolz, Jr., Gerald A.
Teeter, Stanley D.
Thurlby, W. Robert
Turner, II, Finley P.
Wilkins, Jr., Charles F.
Williams, David M.
Young, Sandra S.

PULASKI

Abbott, William W.
Abraham, James H.
Abraham, Robert E.
Adamson, James S.
Alford, T. Dale
Allen, Jr., D. B.
Allen, E. Stewert
Allen, Jr., John E.
Allen, Thomas H.
Alston, Phillip R.
Amir, Jacob
Anderson, J. Roland
Angeles, Jana S.
Araoz, Carlos A.
Armstrong, Howard M.
Aronson, James
Arrington, Robert W.
Ashcraft, Keith E.
Ault, Charles C.
Austin, R. Lee
Autry, Daniel H.
Baber, Jr., John C.
Baber, John T.
Backus, Joe T.
Bailey, Jr., H. A. Ted
Baker, Glen F.
Baker, Johnson J.
Baker, Susan W.
Baldwin, Deane G.
Baldwin, Maxwell R.
Barber, Jeffery Liston
Barclay, David L.
Bard, David S.
Barg, Charles D.
Barger, Denver L.
Barlow, Brian E.
Barnes, Robert W.
Barnett, David C.
Barnett, Troy F.
Barron, Jr., Edwin N.
Batres, Francisco
Bauer, Jr., Frank M.
Bauman, David C.
Bearden, James R.
Beaton, J. Neal
Beck, Joseph M.
Becquet, Norbert J.
Belknap, Melvin L.
Bennett, Eaton W.
Bennett, Jr., F. Anthony

Berry, Frederick B.
Berry, Robert L.
Betton, Harold B.
Bevans, Jr., David W.
Binet, Eugene F.
Biondo, Raymond V.
Bishop, William B.
Black, H. Thurston
Black, Jr., Hal R.
Blackshear, Jr., Jack L.
Blankenship, William F.
Boellner, Samuel W.
Boger, James E.
Boop, Jr., Warren C.
Bornhofen, John H.
Bost, Roger B.
Bowen, William
Box, Jim F.
Boyd, Charles M.
Boyle, Ronald H.
Bozeman, Barbara J.
Bradley, Joe F.
Brainard, Jay O.
Brenner, Jr., George H.
Bressinck, Renie E.
Brewer, Robert M.
Brimberry, Ronald K.
Brinkley, Roy A.
Broach, R. Fred
Brown, Michael F.
Brown, Pamela
Brown, Scott H.
Browning, Donald G.
Browning, Stanley K.
Bryant, Deborah M.
Buchanan, Francis R.
Buchanan, Gilbert A.
Buchman, Joseph A.
Buchman, Joseph K.
Bucolo, Anthony P.
Buford, Joe L.
Bumpas, Joe H.
Burger, Robert A.
Burnett, Hugh F.
Burnham, William W.
Burrow, Dennis R.
Byrd, Jr., Lucas M.
Calcote, Robert A.
Calhoon, J. Dale
Calhoun, Joseph D.
Calhoun, Richard A.
Campbell, Gilbert S.
Campbell, James W.
Caplinger, III, Kelsy J.
Carnahan, Robert G.
Carter, Jerry L.
Caruthers, Jr., Samuel B.
Casali, Robert E.
Casper, Robert B.
Cathey, Janet
Chakales, Harold H.
Chandler, Billy M.
Chappell, Carol W.
Cheairs, David B.
Cheairs, John T.
Chesser, Michael Z.
Chisholm, Dan P.
Choate, Robert B.
Christeson, William W.
Christian, John D.
Chudy, Amail

Church, Beresford L.	Flanigan, Stevenson	Hayes, Jr., J. Harry	Keller, Alford W.
Church, Marion M.	Fletcher, Anthony	Hayes, Richard L.	Kennedy, Charles H.
Clark, Richard B.	Fletcher, Elizabeth D.	Hayes, Sidney P.	Kennedy, H. Frazier
Clift, Steven A.	Fletcher, Thomas M.	Haynes, W. Ducote	Key, J. Michael
Clifton, Cliff	Flippin, Tony A.	Headstream, James W.	Kilgore, Reed W.
Cobb, Jock S.	Florez, James P.	Hearnsberger, Jr., Henry G.	Kimball, Gilbert H.
Cockrill, Jr., H. Howard	Floyd, Bill G.	Hedges, Harold H.	King, Michael T.
Cogburn, Bob E.	Fody, Jr., Edward P.	Hefley, Bill F.	Kittler, Fred J.
Colclasure, Joe B.	Fraiser, Lacy P.	Henker, III, Fred O.	Kizziar, Jim C.
Collins, David	France, Gene L.	Henry, Jr., C. Reid	Knowles, Stanley C.
Cone, John	Fraser, Eric A.	Henry, Sr., Charles R.	Knox, Michael F.
Cone, Michael J.	Fraser, Jr., James H.	Henry, D. Andrew	Koehler, Thomas R.
Cook, Raymond C.	Frazier, George T.	Henry, G. Morrison	Kolb, Agnes J.
Cornell, Paul J.	Fuller, C. Dale	Henry, John C.	Kolb, W. Payton
Cornett, James K.	Fulmer, John M.	Henry, Richard Y.	Koonce, Thomas W.
Cosgrove, Jr., Kingsley W.	Galbraith, Robert C.	Henry, William T.	Kovaleski, Thomas M.
Craig, Jr., Marion S.	Gardner, Guy F.	Herron, Jerry M.	Kozberg, Oscar
Crall, Harold D.	Gaston, Robert S.	Herron, John T.	Kreth, Kay M. [#]
Crews, J. Travis	Gay, Jr., Ellery C.	Hickey, Joseph P.	Krulin, Gregory S.
Crocker, Charles H.	Gettys, Jr., Joseph M.	Hicks, David C.	Kumpuris, Andrew G.
Cross, J. B.	Gibbs, Mark	Hill, Allen	Kumpuris, Frank G.
Crow, Joe W.	Gibson, Gordon L.	Hixson, Marcia Lynn	Kwee, James J.
Crow, Jr., R. Lewis	Giglia, III, Anthony R.	Hodges, J. Timothy	Kyser, James F.
Curtner, Bryon D.	Giles, Wilbur M.	Hodges, Lindy L.	Laakman, Robert W.
Dalrymple, Glenn V.	Gillespie, A. Tharp	Hodges, Steven C.	Lambert, Robert A.
Davis, J. Lynn	Glenn, Wayne B.	Hoffmann, Thomas H.	Landers, James H.
Dean, David M.	Glidden, Michael L.	Holland, Jay D.	Landgren, Robert C.
Dean, Gilbert O.	Glover, Jr., Lawson E.	Hollenberg, Henry G.	Lane, John W.
Deer, Jr., Philip J.	Glover, W. Clyde	Holmes, Harlan C.	Lang, Nicholas P.
Dennis, James L.	Golden, William E.	Holt, Everett L.	Lange, Thomas A.
Denson, William D.	Good, Henry H.	Holt, L. Gordon	Langston, Harold D.
DesLauriers, S. Killeen	Gordon, Vida H.	Holt, Stephen D.	Laurenzana, Donald A.
Dickins, John R. E.	Gosser, Bob L.	Holton, Jerry C.	Lawson, Mason G.
Dickins, Jr., Robert D.	Goza, Jr., George M.	Hough, Jr., Aubrey J.	LeNarz, LeRoy A.
Dickson, D. Bud	Graham, G. Grimsley	Howell, Jr., Coburn S.	Lea, Allen K.
Dillard, Daniel C.	Grant, Karen G.	Howell, Marsha T.	Lehmberg, Robert W.
Diner, Wilma C.	Gray, Edwin F.	Hudson, III, Thomas F.	Leibovich, Marvin
Dixon, Keith A.	Green, Benny J.	Hughes, Ronald D.	Leipzig, Bruce
Dodd, Doyne	Green, III, William O.	Hundley, John M.	Leonard, Donald G.
Dodge, Eva F.	Greenway, C. Don	Hundley, Randal F.	Lepore, Diane G.
Doucet, Marlon J.	Greer, Gerald S.	Hutson, Harold G.	Levin, Frederick R.
Douglas, Warren M.	Greutter, Jr., John E.	Jackson, J. Presley	Lewis, Derek
Downs, Ralph A.	Grimes, H. Austin	Jackson, Morris A.	Lewis, W. Sexton
Duffour, Rory J.	Growdon, James H.	Jansen, G. Thomas	Lile, Henry A.
Dungan, William T.	Guggenheim, Frederick G.	Jay, Walter M.	Lincoln, Ben M.
Durham, James W.	Guin, Jere D.	Jefferson, Thomas T.	Lipke, Jay M.
Dwyer, Gregory A.	Hagler, James L.	Jelovsek, Frederick R.	Livingston, Richard Lee
Easley, Edgar J.	Hahn, Herbert	Johnson, B. Richard	Loebl, Edward C.
Easter, Rex M.	Hall, A. D.	Johnson, Ben D.	Logan, Charles W.
Edge, Otis H.	Hall, A. David	Johnson, Henry D.	Love, Jr., Tommy L.
Edmiston, Frank G.	Hall, R. Whit	Johnson, Philip H.	Love, Betty A.
Eisenach, Robert J.	Hampton, III, John R.	Johnston, Dale E.	Lucas, Kathryn Jean
English, Jimmy L.	Hankins, III, Edwin	Johnston, Thomas G.	Lucy, Jr., Dennis D.
Eyre, Byron L.	Hardberger, R. E.	Jones, Gail R.	Ludwig, Frank R.
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Farque, Greg L.	Harger, C. Harold	Jones, John C.	Malak, F. A.
Farrell, Robert E.	Hargrove, Joe L.	Jones, Robert D.	Mallory, Jr., George B.
Farris, Jr., Guy R.	Harper, Ernest H.	Jones, William N.	Mallory, John A.
Fernandez, Agustin	Harper, Gary E.	Jordan, F. Richard	Maloney, F. Patrick
Ferris, Ernest J.	Harrendorf, Cagle	Jordan, Randy A.	Mann, R. Jerry
Fewell, Ronald D.	Harris, Donald R.	Joseph, Ralph F.	Marecek, Raymond L.
Fielder, Charles R.	Harris, Frances R.	Joseph, William Frank	Markland, Gary S.
Finan, Barre F.	Harris, Ruben Michael	Jouett, W. Ray	Marks, Stephen R.
Fincher, Robert L.	Harris, T. Stuart	Joyce, John W.	Martin, Richard H.
Finkbeiner, Alex E.	Harris, William T.	Junkin, Ruth H.	Marvin, Peter
Fiser, P. Martin	Harrison, A. Vale	Kaemmerling, Raymond E.	Mason, J. Zachary
Fiser, Jr., Robert H.	Harrison, Roy E.	Kahn, Jr., Alfred	Mason, William L.
Fiser, Jr., William P.	Harrison, William E.	Kane, James J.	Matthews, Joseph W.
Fitzgerald, Charles P.	Harshfield, Jr., David Lee	Keathley, Susan A.	Matthews, Robert R.
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McAndrew, Mark P.
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 McCracken, Gail Ann
 McCracken, John D.
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 Murphy, Randolph
 Nagel, Fred G.
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 Ozment, Kerry L.
 Padilla, Fernando

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 Quirk, J. Gerald
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 Riegler, Jr., N. W.
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 Ringdahl, Irving C.
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 Rodgers, Charles H.
 Rodgers, Clyde D.[#]
 Rooney, Thomas P.
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 Rounsaville, Harry L.
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 Ruggles, Dwayne L.
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 Selby, Jr., John H.
 Shannon, Robert F.
 Shock, John P.
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 Simpson, Jr., N. Henry
 Sims, James M.
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 Sipes, Frank M.
 Skokos, C. Kemp
 Slater, Jr., John G.
 Slaven, John E.
 Slayden, John E.
 Sloan, Fay M.
 Sloan, James M.
 Smart, Douglas F.
 Smith, Aubrey C.
 Smith, David E.
 Smith, Douglas B.
 Smith, Jr., G. Richard
 Smith, Joe E.
 Smith, John McCollough[#]
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 Smith, Thomas J.
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 Snyderman, Nancy L.
 Somers, A. Jack
 Sorrells, R. Barry
 Sotomora, Ricardo F.
 Spitzberg, Irving J.
 Squire, Jr., Arthur E.
 Stair, J. Michael
 Stanley, Joe P.
 Steele, William L.
 Sternberg, Jack J.
 Stone, Phillip S.
 Storeygard, Alan R.
 Stotts, John R.
 Strauss, Jr., Alvin W.
 Strauss, Mark A.
 Strode, Steven W.
 Stroope, George F.
 Stuckey, Jr., James G.
 Studdard, James D.
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 Sullivan, Charles D.
 Sullivan, Jan R.
 Sundermann, Richard H.
 Swindoll, Bryant S.
 Tamas, David E.
 Tanner, James A.
 Taylor, David R.
 Taylor, Eugene H.
 Tedford, John G.
 Teeter, John A.
 Texter, Jr., E. Clinton
 Thomas, A. Henry
 Thomas, Jerry L.
 Thomas, Peter O.
 Thompson, A. James
 Thompson, A. Reed
 Thompson, Dola S.
 Thompson, John R.
 Thompson, Jr., S. Berry
 Thompson, Samuel B.
 Thorn, G. Max
 Tilley, Steve B.

Tirman, Robert M.
 Towbin, Eugene J.
 Tracy, Phillip A.
 Trantum, Bill L.
 Trussell, Thomas W.
 Tseng, Jyi-Ming
 Tucker, R. Stephen
 Tucker, W. Everett
 Valentine, Jr., Robert G.
 Vander Schilden, John L.
 Velez, Louis D.
 Vogel, Robert G.
 Wade, Jr., William I.
 Wagoner, Jack
 Walt, James R.
 Ward, Harry P.
 Ward, Joseph P.
 Warford, Lloyd R.
 Warford, Walton R.
 Watkins, Charles J.
 Watkins, Jr., John G.
 Watkins, III, John G.
 Watkins, Larry S.
 Watson, C. Robert
 Weber, Edward R.
 Weber, James R.
 Weber, Michael J.
 Weiss, Gerald N.
 Welch, Samuel Bradley
 Wellons, Jr., James A.
 Wende, Raymond A.
 Wenger, Carl E.
 Westbrook, Kent C.
 Westendorp, Floyd
 Westerfield, Jr., Frank M.
 Westerman, G. Richard
 White, Oba B.
 White, Ronald Lynn
 White, Rowena R.
 Wilkes, Elbert H.
 Wilkes, T. David I.
 Williams, Alonzo D.
 Williams, C. David
 Williams, Jr., G. Doyne
 Williams, Ronald N.
 Wilson, Elaine
 Wilson, Frances C.
 Wilson, Jr., Frank J.
 Wilson, Ivan D.
 Wilson, James W.
 Wilson, Jed D.
 Wilson, John L.
 Wilson, R. Sloan
 Winn, Jr., Charles R.
 Wong, Ting C.
 Wortham, Thomas H.
 Wright, Ruel N.
 Young, Douglas E.
 Zelnick, Paul W.

RANDOLPH

Baltz, Albert L.
 Baltz, M. A.
 Barre, Hal S.
 Cannon, Donald C.
 DeClerk, Thomas B.
 Holt, Danny B.
 Jansen, III, Andrew J.
 Murrey, James F.
 Scott, William W.
 Smith, Norman K.

SALINE

Ashby, John W.
Ashby, Robert M.
Baber, Quin M.
Bethel, James C.
Burton, Charles R.
Caldwell, David L.
Cash, Ralph D.
Coker, S. Dale
Cooper, James B.
Cornwell, Samuel L.
Council, Jr., Robert A.
Duncan, J. Shelby
Gardner, Dan R.
Harrington, Mariann
Hermann, Jr., Ernest J.
Hill, Edward B.
Hill, Howell V.
Hogue, F. Paul
Hood, C. Ted
Izard, Jr., Ralph S.
Johnston, Greg
Kirk, Jr., Marvin N.
Martindale, J. L.
Mizell, Walter S.
Ramsay, Jr., Rex C.
Stewart, David L.
Sudderth, Brian F.
Taggart, Sam D.
Thibault, Jr., Frank G.
Thomas, Bill R.
Thompson, Steven M.
Thorn, Jr., Harvey Bell
Tilley, Roger L.
Viner, Donald L.
Wright, John D.

SEBASTIAN

Acklin, Jimmy D.
Albers, David G.
Alberty, Joe P.
Anderson, Paul M.
Armstrong, Jr., Sinclair W.
Atkins, Jimmie G.
Axelsen, Nils K.
Bailey, Charles W.
Baker, Max A.
Barker, Jr., Robert C.
Barnes, L. Ford
Barry, Jr., James M.
Berryhill, Richard E.
Berumen, Mike
Bordeaux, Ronald A.
Bradford, A. C.
Brown, James A.
Brown, Michael W.
Brown, Richard N.
Buffaloe, Robert N.
Buie, James H.
Busby, J. David
Cabell, Ben B.
Carson, Randall L.
Carter, D. Mike
Cassady, Calvin R.
Chambers, A. Pat
Chamblin, Don W.
Cheshier, James L.
Chester, Robert L.
Coffman, Edwin L.

Coleman, Michael D.
Crow, Sr., Neil E.
Crow, Jr., Neil E.
Culp, William C.
Cunningham, Charles S.
Davenport, O. Leo
Deaton, John M.
Deneke, James S.
Desrochers, Paul E.
Dorzab, Joe H.
Drolshagen, Ill, Leo F.
Dudding, William F.
Edmondson, Steve A.
Ellis, Homer G.
Erickson, Clark A.[#]
Faier, Samuel Z.
Fecher, Dennis R.
Feder, Jr., Frederick P.
Feezell, Randall E.
Feild, Ill, T. A.
Felker, Gary V.
Fisher, Robert D.
Floyd, Charles H.
Francis, Il, Darryl R.
Gedosh, Edgar A.
Giggs, William L.
Gill, James A.
Gilliland, J. Campbell
Gilmore, Myriam D.
Girkin, R. Gene
Glover, D. Bruce
Goodman, Jr., R. Cole
Goodman, Sr., Raymond C.
Graves, Stephen C.
Greene, James S.
Hathcock, Alfred B.
Herren, Adrian L.
Hewett, Archie L.
Hinkle, Jr., Richard A.
Hoffman, John D.
Hoge, Marlin B.
Holman, William A.
Holmes, Jr., Williams C.
Hornberger, Jr., Evans Z.
Howell, James T.
Hughes, Jr., Robert P.
Hunton, David W.
Hunton, Teresa H.
Huskison, William T.
Hyde, Marshall L.
Ingram, Ralph N.
Irwin, Peter J.
Janes, Jr., Robert H.
Jones, W. Duane
Kareus, John L.
Kelly, Thomas C.
Kelsey, J. F.
Kennedy, Virgil N.
Kientz, Jr., John
King, William P.
Klopfenstein, Keith
Knight, William E.
Kocher, David B.
Koenig, Ill, A. Samuel
Koenig, Jr., Albert S.
Kradel, R. Paul
Kramer, Ralph G.
Kutait, Kemal E.
Lambiotte, Louis O.
Landrum, Annette V.
Landrum, Samuel E.

Lane, Jr., Charles S.
Lange, John L.
Lenington, Jerry O.
Lewing, Hugh S.
Lilly, Ken E.
Lockhart, William G.
Lockwood, Frank M.
Long, James W.
Lynch, Thomas P.
MacDade, Albert D.
Magness, Jr., Jack L.
Maloney, Ill, Thomas
Manus, Stephen C.
Martin, Art B.
Martin, Maurice C.
Mason, Joe N.
Masri, Hassan M.
McChristian, Jimmy W.
McClain, Merle E.
McCraw, Gordon W.
McDonald, H. P.
McEwen, Stanley R.
McKinney, Robert D.
McMinimy, D. J.
Meador, Don M.
Miller, Robert C.
Mings, Harold H.
Mitchell, Bob G.
Moulton, Jr., Everett C.
Moulton, Ill, Everett C.
Mumme, Marvin E.
Muylaert, Michel
Nassri, Louay
Nelson, Steven
Nichols, David R.
Niemann, Jeffrey M.
Nolewajka, Andre J.
Olson, John D.
Parham, Gordon R.
Paris, Charles H.
Parker, Jr., Douglas W.
Parker, Jr., Joel E.
Parker, Stephen M.
Parker, Thomas G.
Patrick, Donald L.
Pearce, Larry W.
Pence, Jr., Eldon D.
Perrymore, W. Dale
Phillips, W. P.
Pillstrom, Lawrence G.
Poe, Jr., McDonald
Poole, M. Louis
Post, James M.
Pradel, Paul A.
Prewitt, Taylor A.
Price, Lawrence C.
Rabideau, Dana P.
Raby, Paul L.
Raymond, Thomas H.
Robinson, Ronald P.
Rogers, Paul L.
Ross, R. Wendell
Russell, Rex D.
Safranek, Edward J.
Saviers, Boyd M.
Schemel, William H.
Schwarz, Paul R.
Serrano, Ernest E.
Sherman, Robert L.
Sherrill, Jr., William M.
Smith, Herbert T.

Smith, Kent
Smith, Terrald J.
Snider, James R.
Staggs, J. David
Standefor, J. Michael
Stanton, William B.
Stewart, Jerry R.
Stewart, John B.
Still, Il, Eugene F.
Swena, Richard R.
Swicegood, John R.
Tait, Stacy R.
Tate, William B.
Thompson, J. Kenneth
Thompson, James B.
Thompson, Robert J.
Turner, William F.
Vanderpool, Roy E.
Venturina, Arturo P.
Vernon, Jr., Rowland P.
Wahman, Gerald E.
Walker, Gary V.
Wallace, Kenneth K.
Walling, Robert V.
Watts, Jr., John C.
Webb, William K.
Weisse, John J.
Wells, John D.
Westermann, Norman F.
Whitaker, Jr., T. J.
White, Ill, J. Earle
Whiteside, Edwin
Wideman, John W.
Wikman, John H.
Williams, Carl L.
Wills, Paul I.
Wilson, James M.
Wilson, Morton C.
Wilson, Steven K.
Wolfe, Michael S.
Woods, Leon P.
Worrell, John A.
Zufari, Munir M.

SEVIER

Hoyt, Jonathan
Jones, Charles N.
Stearns, David E.
Yeh, William L.

ST. FRANCIS

Bard, Ralph M.
Barker, Charles L.
Cogburn, Harold N.
Collins, Jr., E. Morgan
Crawley, Charles E.
DeRossitt, Ill, James P.
Fong, Fun Hung
Hammons, Edward P.
McGuire, Ill, Samuel A.
McPhail, George T.[#]
Schwartz, Frank R.

TRI-COUNTY

Allen, Lewis G.
Arnold, Carl B.
Benton, Thomas H.

Bozeman, Jim G.
 Ducker, David E.
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 Lane, Robert C.
 Meisenheimer, III, Martin P. #
 Moody, Michael N.
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UNION

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 Dougherty, Bert
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 Giller, Jr., W. John
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 Hartmann, Ernest R.
 Hill, Jr., Grady E.
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 Tommey, Robert C.
 Turnbow, Joe F.
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 Vasan, Srini
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 Wu, William
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VAN BUREN

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 Tahir, Syed Z.

WASHINGTON

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 Baker, Donald B.
 Beckman, Jr., James S.
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 Brown, David L.
 Burlingame, Robert K.
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 Chase, Patrick R.
 Cherry, James F.
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 Hui, Anthony
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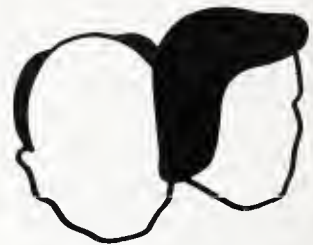
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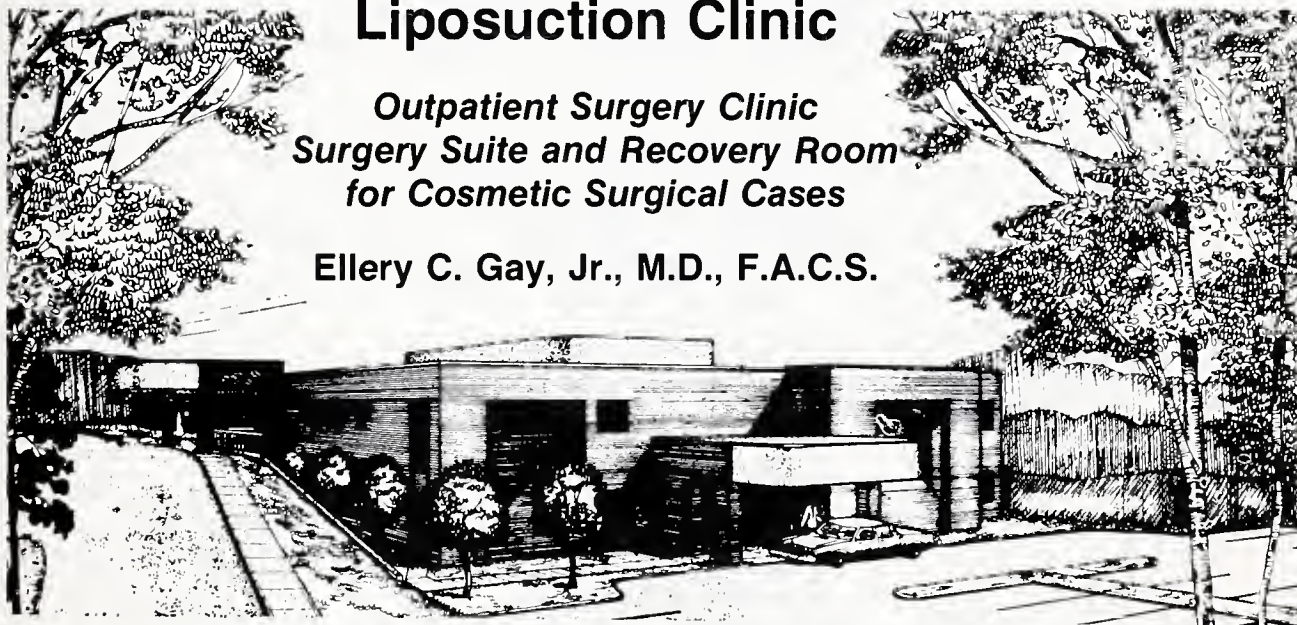
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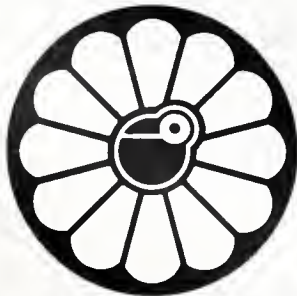
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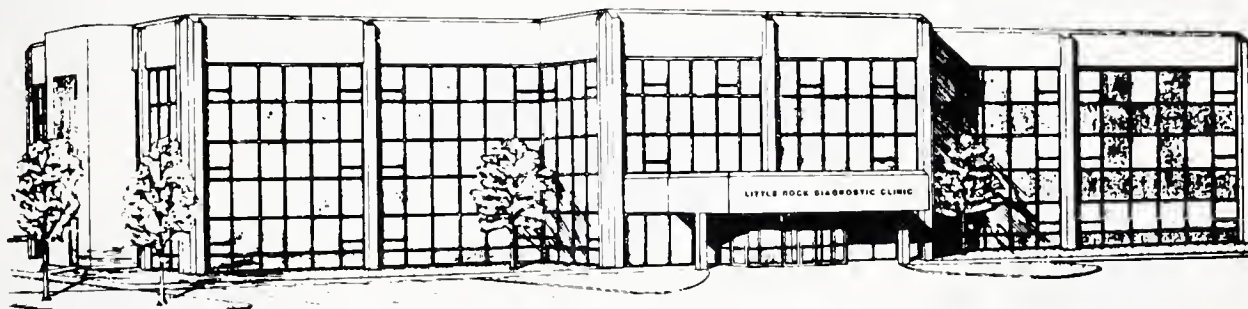
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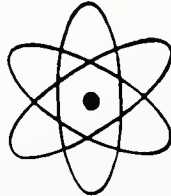
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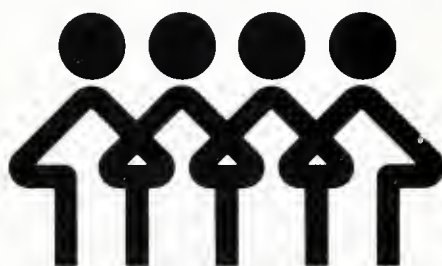
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AIDS: New Case Definition

J. P. Lofgren, M.D.*

Introduction

On August 14, 1987, the Centers for Disease Control (CDC) published a new case definition for AIDS.¹ The purpose of this paper is to highlight the definition using a more clinical format.

When AIDS was discovered, it was obvious that the underlying problem was a weakened cellular immune system. Therefore, in 1982, CDC defined a case of AIDS as "a disease, at least moderately predictive of a defect in cell-mediated immunity, occurring in a person with no known cause of diminished resistance to that disease."² The Centers for Disease Control included a list of diseases which would qualify the patient to meet this case definition. Following the course of the devastating AIDS epidemic has been possible because of this case definition and refinements adopted in 1985.³

History

Initially, the cause of AIDS was unknown. When the Human Immunodeficiency Virus (HIV) was discovered, it was obvious that the case definition was specific since almost all AIDS patients were positive for HIV antibodies. However, the case definition was not designed to be sensitive in identifying all persons infected with HIV.

Symptoms of HIV infection are manifest in two ways. Symptoms caused directly by the virus include the spectrum from the initial mononucleosis-like syndrome, to lymphadenopathy, to various severe manifestations such as dementia and the "wasting syndrome." HIV also weakens the cellular immune system. This is manifested indirectly by opportunistic infections and certain cancers.

The CDC has published a classification system for HIV infection.⁴ It consists of Groups I-IV which roughly reflect the progression of the disease: Group I is the acute mononucleosis-like infection associated with seroconversion to HIV; Group II is the asymptomatic phase; Group III

is persistent generalized lymphadenopathy; Group IV is all other disease. All those who meet the case definition for AIDS are in Group IV, but not all those who are in Group IV meet the case definition.

The purpose of having the case definition is to accurately track the epidemic by including all severe disabling disease cause by the HIV. The case definition needed to be revised to accomplish this purpose because of accumulating knowledge about HIV disease and changing medical practice.

Definition Changes

The major changes in the August 14th revision of the case definition include: (1) accepting diseases thought to be caused specifically by HIV, i.e., HIV encephalopathy and HIV wasting syndrome; (2) accepting a broader range of indicator diseases in those who have serologic evidence of HIV infection; (3) accepting presumptive diagnosis of certain diseases in those with serologic evidence of HIV infection; (4) accepting patients with indicator diseases even if they have a non-HIV related reason for immunodeficiency, provided that they have serologic evidence of HIV infection; and (5) since serologic tests measuring HIV antibody are sometimes negative in severe AIDS, accepting patients with indicator diseases even if they are HIV antibody negative, provided that they don't have another reason to be immunosuppressed and their T-helper cell count is less than 400/mm.³

The actual CDC case definition ran 10 pages. Although it was written in a logical manner, it was somewhat hard to understand upon first reading. Furthermore, to determine whether or not a specific patient met the case definition, one almost needed to re-read the entire definition. Table III shows the case definition rearranged in a simplified manner. It is hoped that the table will parallel the process physicians use in diagnosing disease.

Explanation of Table Symbols

The last column in Table III gives the possible options of the immune status requirements. The presence in this column of the letter "B" for each condition means that for

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TABLE I - REASONS FOR IMMUNODEFICIENCY NOT RELATED TO HIV

Causes of immunodeficiency that disqualify diseases as indicators of AIDS in the absence of laboratory evidence for HIV infection:

1. high-dose or long-term systemic corticosteroid therapy or other immunosuppressive/cytotoxic therapy ≤ 3 months before the onset of the indicator disease.
2. any of the following diseases diagnosed before or ≤ 3 months after diagnosis of the indicator disease: Hodgkin's disease, non-Hodgkin's lymphoma (other than primary brain lymphoma), lymphocytic leukemia, multiple myeloma, any other cancer of lymphoreticular or histiocytic tissue, or angioimmunoblastic lymphadenopathy
3. a genetic (congenital) immunodeficiency syndrome or an acquired immunodeficiency syndrome atypical of HIV infection, such as one involving hypogammaglobulinemia

each, this requirement can be met by evidence of HIV infection as defined in Table II. For some conditions, there are other options for fulfilling the immune status requirement. The letter "A" means that it can be fulfilled if there is no non-HIV reason for immunodeficiency as defined by Table I. The letter "C" means that the patient will meet the requirements even if there is evidence against HIV infection (see Table II) *as long as* there is no non-HIV reason for immunodeficiency (see Table I) *and* the T-helper lympho-

cytes are $< 400/\text{mm}^3$. The letter "D" is used only with *Pneumocystis carinii* pneumonia and means the same as letter "C" except the T-helper lymphocyte count is not required.

Table I lists the conditions that CDC feels cause immunosuppression such that one should not blame it on HIV. Table II depicts what the CDC accepts as serologic and other laboratory evidence for or against HIV infection.

As discussed above, the term AIDS should only be used to refer to conditions meeting the case definition. This definition is intended only to provide consistent statistical data for public health purposes. Most would agree that the reporting of AIDS had provided valuable information in describing this epidemic. To continue this effort (and because AIDS is a reportable condition), all cases, including cases treated in the past but only qualifying as AIDS under the latest revision, should be reported to the state Department of Health.

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3. Centers for Disease Control. Revision of the case definition of acquired immunodeficiency syndrome for national reporting-United States. MMWR 1985; 34:373-5.
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TABLE II: DEFINITION OF HIV STATUS, WHEN USING CDC CASE DEFINITION

FIRST TEST	SECOND TEST	AGE/MATERNAL STATUS	OTHER TESTS	HIV STATUS
Culture Positive				Evidence of infection
Antigen Positive				Evidence of Infection
EIA Positive	WB or IFA + or ND	Patient ≥ 15 mo.		Evidence of infection
EIA Positive	WB or IFA + or ND	Child < 15 mo. and mother has no evidence of Infection		Evidence of Infection
EIA Positive	WB or IFA + or ND	Child < 15 mo. and mother infected	Serum immunoglobulin levels up AND at least one of the following: 1. Lymphocytes down 2. T-helper down 3. CD4/CD8 down	Evidence of infection
EIA Positive	WB or IFA + or ND	Child < 15 mo. and mother infected	Criteria above not fulfilled	Inconclusive
EIA Positive	WB or IFA - or ?			Inconclusive
EIA Negative	WB or IFA -, ? or ND			No evidence

EIA=enzyme-linked immunosorbent assay; WB=Western blot; IFA=Immunofluorescence assay; + =positive; ND=not done; CD4/CD8 = helper/suppressor lymphocyte ratio; - =negative; ? =inconclusive

TABLE III. CASE DEFINITION				
AGENT OR CONDITION	CLINICAL SPECIFICS	AGE	DIAGNOSTIC METHODS REQUIRED	IMMUNE STATUS*
BACTERIAL Pyogenic bacteria (i.e. <i>Haemophilus</i> , <i>Streptococcus</i> , <i>pneumococcus</i>)	Any combination of at least two episodes within a 2-yr. period of: septicemia, pneumonia, meningitis, bone or joint infection, abscess of an internal organ or body cavity (excluding otitis media or superficial skin or mucosal abscesses)	< 13 y	Culture	B
<i>Salmonella</i> (nontyphoid)	septicemia, recurrent		Culture	B
MYCOBACTERIA <i>M. Tuberculosis</i>	extrapulmonary (involving at least one site outside the lungs)		Culture	B
<i>M. avium</i> complex or <i>M. kansasii</i>	disseminated (at a site other than or in addition to lungs, skin, or cervical or hilar lymph nodes)		Culture	A, B, C
Non-TB mycobacteria	disseminated (at a site other than or in addition to lungs, skin, or cervical or hilar lymph nodes)		Culture	B
mycobacteria (AFB not identified by culture)	disseminated (involving at least one site other than or in addition to lungs, skin, or cervical or hilar lymph nodes)		microscopy of a specimen from stool or normally sterile body fluids or tissue from a site other than lungs, skin or cervical or hilar lymph nodes, showing acid-fast bacilli of a species not identified by culture	B
VIRUSES CMV (cytomegalovirus)	In an organ other than liver, spleen, or lymph nodes	> 1 mo	microscopy (histology or cytology)	A, B, C
	retinitis with loss of vision	> 1 mo	characteristic appearance on serial ophthalmoscopic examinations	B
Herpes simplex virus	mucocutaneous ulcer persisting longer than 1 month		microscopy (histology or cytology), culture, or detection of antigen in a specimen obtained directly from the tissues affected or a fluid from those tissues	A, B, C
	bronchitis, pneumonitis, or esophagitis	> 1 mo		
*IMMUNE STATUS OPTIONS				
A = Patient has no reason to be immunosuppressed (see Table I);				
B = Patient has evidence of HIV infection (see Table II);				
C = Patient has no evidence of HIV infection (see Table II) but there is no reason for immunosuppression and the T-helper lymphocytes number less than 400/mm ³ ;				
D = Same as C, but T-helper count unnecessary.				

TABLE III. CASE DEFINITION (CONTINUED)

AGENT OR CONDITION	CLINICAL SPECIFICS	AGE	DIAGNOSTIC METHODS REQUIRED	IMMUNE STATUS*
VIRUSES (CONTINUED) HIV	Encephalopathy ("HIV dementia"): Clinical findings of disabling cognitive and/or motor dysfunction interfering with occupation or activities of daily living, or loss of behavioral developmental milestones affecting a child, progressing over weeks to months		Absence of a concurrent illness or condition other than HIV infection that could explain the findings. Methods to rule out such concurrent illnesses and conditions must include cerebrospinal fluid examination and either brain imaging (computed tomography or magnetic resonance) or autopsy	B
	wasting syndrome: findings of profound involuntary weight loss >10% of baseline body weight plus either chronic diarrhea (at least two loose stools per day for \geq 30 days) or chronic weakness and documented fever (for \geq 30 days, intermittent or constant)		Absence of a concurrent illness or condition other than HIV infection that could explain the findings (e.g., cancer, tuberculosis, cryptosporidiosis, or other specific enteritis)	B
Papovavirus	Progressive multifocal leukoencephalopathy		microscopy (histology)	A, B, C
FUNGI Candidiasis	of the esophagus, trachea, bronchi or lungs		gross inspection by endoscopy or autopsy or by microscopy (histology or cytology) on a specimen obtained directly from the tissues affected (including scrapings from the mucosal surface), not from a culture	A, B, C
	esophagus		a. recent onset of retrosternal pain on swallowing AND b. oral candidiasis diagnosed by the gross appearance of white patches or plaques on an erythematous base or by the microscopic appearance of fungal mycelial filaments in an uncultured specimen scraped from the oral mucosa	B
*IMMUNE STATUS OPTIONS A = Patient has no reason to be immunosuppressed (see Table I); B = Patient has evidence of HIV infection (see Table II); C = Patient has no evidence of HIV infection (see Table II) but there is no reason for immunosuppression and the T-helper lymphocytes number less than 400/mm ³ ; D = Same as C, but T-helper count unnecessary.				

TABLE III. CASE DEFINITION (CONTINUED)

AGENT OR CONDITION	CLINICAL SPECIFICS	AGE	DIAGNOSTIC METHODS REQUIRED	IMMUNE STATUS*
FUNGI (CONTINUED) <i>Coccidioidomycosis</i>	disseminated (at a site other than or in addition to lungs or cervical or hilar lymph nodes)		microscopy (histology or cytology), culture, or detection of antigen in a specimen obtained directly from the tissues affected or a fluid from those tissues	B
Cryptococcosis	extrapulmonary		microscopy (histology or cytology), culture, or detection of antigen in a specimen obtained directly from the tissues affected or a fluid from those tissues	A B, C
Histoplasmosis	disseminated (at a site other than or in addition to lungs or cervical or hilar lymph nodes)		microscopy (histology or cytology), culture, or detection of antigen in a specimen obtained directly from the tissues affected or a fluid from those tissues	B
Toxoplasmosis	of the brain	> 1 mo	microscopy (histology or cytology) a. recent onset of a focal neurologic abnormality consistent with intracranial disease or a reduced level of consciousness; AND b. brain imaging evidence of a lesion having a mass effect (on computed tomography or nuclear magnetic resonance) or the radiographic appearance of which is enhanced by injection of contrast medium; AND c. serum antibody to toxoplasmosis or successful response to therapy for toxoplasmosis	A, B, C B
PROTOZOAN <i>Pneumocystis carinii</i>	pneumonia		microscopy(histology or cytology)	A, B, D

*IMMUNE STATUS OPTIONS

A = Patient has no reason to be immunosuppressed (see Table I);

B = Patient has evidence of HIV infection (see Table II);

C = Patient has no evidence of HIV infection (see Table II) but there is no reason for immunosuppression and the T-helper lymphocytes number less than 400/mm³;

D = Same as C, but T-helper count unnecessary.

TABLE III. CASE DEFINITION (CONTINUED)				
AGENT OR CONDITION	CLINICAL SPECIFICS	AGE	DIAGNOSTIC METHODS REQUIRED	IMMUNE STATUS*
PROTOZOAN (CONTINUED) Pneumocystic carinii (continued)			a. a history of dyspnea on exertion or nonproductive cough of recent onset (within the past 3 months); AND b. chest x-ray evidence of diffuse bilateral interstitial infiltrates or gallium scan evidence of diffuse bilateral pulmonary diseases; AND c. arterial blood gas analysis showing an arterial pO ₂ of < 70 mm Hg or a low respiratory diffusing capacity (< 80% of predicted values) or an increase in the alveolar-arterial oxygen tension gradient; AND d. no evidence of a bacterial pneumonia	B
Cryptosporidiosis	diarrhea persisting > 1 mo		microscopy (histology or stool analysis)	A, B, C
Isosporiasis	diarrhea persisting > 1 mo		microscopy (histology or stool analysis)	B
MALIGNANCIES Kaposi's sarcoma		< 60y	microscopy (histology)	A, B, C
			microscopy (histology) OR a characteristic gross appearance of an erythematous or violaceous plaque-like lesion on skin or mucous membrane. (Diagnosis by appearance should be made only by physicians with experience with Kaposi's sarcoma!)	B
	of the brain (primary)	< 60 y	microscopy (histology)	A, B, C
			microscopy (histology)	B
lymphoma				
*IMMUNE STATUS OPTIONS A = Patient has no reason to be immunosuppressed (see Table I); B = Patient has evidence of HIV infection (see Table II); C = Patient has no evidence of HIV infection (see Table II) but there is no reason for immunosuppression and the T-helper lymphocytes number less than 400/mm ³ ; D = Same as C, but T-helper count unnecessary.				

TABLE III. CASE DEFINITION (CONTINUED)				
AGENT OR CONDITION	CLINICAL SPECIFICS	AGE	DIAGNOSTIC METHODS REQUIRED	IMMUNE STATUS*
MALIGNANCIES (CONTINUED)				
	Other non-Hodgkin's lymphoma of B-cell or unknown immunologic phenotype and the following histologic types: a. small noncleaved lymphoma (either Burkitt or non-Burkitt type) b. immunoblastic sarcoma		microscopy (histology)	B
MISCELLANEOUS				
	Lymphoid interstitial pneumonia and/or pulmonary lymphoid hyperplasia (LIP./PLH complex)	< 13y	microscopy (histology or cytology)	A, B, C
			bilateral reticulonodular interstitial pulmonary infiltrates present on chest x-ray for <u>≥</u> 2 months with no pathogen identified and no response to antibiotic treatment	B
*IMMUNE STATUS OPTIONS				
A = Patient has no reason to be immunosuppressed (see Table I);				
B = Patient has evidence of HIV infection (see Table II);				
C = Patient has no evidence of HIV infection (see Table II) but there is no reason for immunosuppression and the T-helper lymphocytes number less than 400/mm ³ ;				
D = Same as C, but T-helper count unnecessary.				

BELOW ARE THE NAMES WHICH WERE INADVERTENTLY LEFT OUT OF THE ARKANSAS MEDICAL SOCIETY ROSTER OF MEMBERSHIP 1987 WHICH APPEARED IN THE DECEMBER, 1987 ISSUE OF THE JOURNAL. WE APOLOGIZE FOR THE ERROR AND APPRECIATE THE UNDERSTANDING OF THE MEMBERS WHOSE NAMES WERE OMITTED.

ARKANSAS MEDICAL SOCIETY SUPPLEMENTAL ROSTER OF MEMBERSHIP 1987

ASHLEY

Cothorn, William R.
Salb, Robert L.

BENTON

Rollow John A.

CLARK

Parson, Jr., V. Earl

CRAIGHEAD-POINSETT

Rainwater, W. T.

DESHA

Turney, Lonnie R.

GARLAND

Jackson, Haynes G.
Parkerson, Cecil W.

GREENE-CLAY

Williams, Jacob M.

HOWARD-PIKE

Jones, William J.

JEFFERSON

Atnip, Gwyn
Robinette, Joseph S.

MILLER

Dildy, Jr., Edwin V.

MISSISSIPPI

Fairley, Eldon
Rodman, T.N.

PHILLIPS

Barrow, Jr., John H.

PULASKI

Adametz, John H.
Bradburn, Jr., Curry B.
Brizzolara, A. J.
Carson, Layne E.
Henry, Jr., J. Forrest
Henry, Jr., Robert R.
Mizell, Walter S.
O'Neal, Walter H.
Padberg, Frank T.
Peters, John E.
Reese, William G.
Smith, James L.
Vaughter, W. Roger
Weiss, Gerald N.

SEBASTIAN

Brown, Byron L.
Lambiotte, Louis O.

UNION

King, Billy D.

"LEGALLY SPEAKING"

RE: Physician Medical Records - Disposal

Michael W. Mitchell, J.D.*



This page of "Legally Speaking" completes a two-part series on physician medical records. The second part deals with disposal of medical records. "Disposal" of medical records for purpose of this article includes: forwarding to a new physician at patient's request; forwarding to a custodian physician with notice to patient; storage with notice to the patient; and destruction. A physician's need to dispose of medical records arises from a variety of reasons including physician death, retirement or sale of his or her practice. Physicians also experience storage problems contributed to by retaining files on former patients.

Both ethical and personal concerns arise with respect to disposition. Ethically, the physician is bound to recognize that "the interest of the patient is paramount..., and everything that can reasonably and lawfully be done to serve that interest must be done by all physicians who have served or are serving the patient."¹ Medical records are important to the patient "...not only for medical care but also for employment, insurance, litigation or other reason...".² Therefore, a physician's ethical duty is to preserve medical records during the time there is reasonable likelihood for their usefulness to the patient. However, medical records are of little use to a deceased patient, where there is no medical malpractice implications, and they are likewise of little use to the patient who has moved on, secured other physicians and long since forgotten the first physician's medical care. Even though the *AMA Current Opinions* avoids approving outright destruction, there appears to be no ethical prohibition against destruction of medical records in the appropriate situation. It is conceded, however, that destruction of medical records is a disposition of last resort to be considered only after the other alternatives have failed.

Consideration must first be given to the *manner* of disposition. The manner of disposition must be calculated

to meet the ethical and legal obligations of serving the "interest of the patient."³ Written notice should first be given to the patient requesting instructions as to disposition. The notice should include the alternatives for disposition acceptable to the physician and a form should be included for the patient's signature.⁴ However, where the physician has made a diligent though unsuccessful effort to obtain written instructions from the patient and where the physician has a reasonable belief that the records are no longer useful to the patient, the physician may decide on destruction. A method of destruction must be utilized that will guard the patient's right to privacy and comply with the physician's duty of confidentiality. Finally, copies of all letter notices and a notation of disposition should be maintained for future reference.

Since the medical records are important not only for the patient's welfare but also for the physician's own legal protection, the timing for destruction must be considered. Patient records which are no longer useful to the patient should be destroyed only after the running of the applicable statute of limitations for any possible medical malpractice action. In Arkansas, there are four statutes of limitation to consider. Generally, medical malpractice actions must be commenced within two years after the alleged "wrongful act complained of."⁵ However, in surgical cases where a foreign object is left in the body, an action may be brought within one year from the date of the discovery or the date the foreign object reasonably should have been discovered.⁶ A minor under the age of 18 years at the time of the alleged negligence has until the "nineteenth birthday" in which to commence an action.⁷ Finally, any person who has been "adjudged incompetent" at the time of the alleged negligence has until one year after such disability is removed in which to commence the action.⁸ Therefore, assuming the failure of reasonable efforts to forward the medical records to an appropriate party and assuming the physician has chosen destruction, the physician must then determine a particular time to destroy the records. It is our general

*General Counsel to the Arkansas Medical Society, Mitchell and Roachell Law Firm, Post Office Box 1510, Little Rock, Arkansas 72203.

recommendation that records be destroyed no earlier than five years after the running of the statute of limitations. In surgical cases in which the "foreign object" exception might apply, the surgeon must exercise discretion and make an independent determination of the time safe to destroy records. In most cases, however, these records will be maintained at the hospital and not at the physician's office. Similarly, in cases of minors, physicians may retain records at least five years beyond the date of the nineteenth birthday. Finally, in cases of an "adjudicated incompetent" the statute does not run until one year after the "disability is removed." Our recommendation, therefore, is that records be retained for a minimum of five years beyond the anniversary date of disability removal.

In conclusion, the appropriate situation must present in order for the physician to consider disposal of medical records. The alternatives of disposal should first be considered with the last resort being that of destruction. Proper procedure should be used in an attempt to notify the patient and a record of the notice should be maintained as well as

a notation of the disposition. Destruction should be utilized only after the physician has made diligent effort to obtain written instructions for other disposition, after the physician determines the medical records are no longer useful to the patient and that the statute of limitations for any potential medical malpractice had long since run. Under these circumstances, there is no legal or ethical prohibition against destruction so long as the manner of destruction is reasonably calculated to protect the patient's rights to confidentiality and privacy.

References

1. Current Opinions of the Council on Ethical and Judicial Affairs of the American Medical Association 7.01 (1986)
2. Id. 7.03; also see Medical Trial Technique Quarterly, 295-6 (1978).
3. Id. 7.01.
4. Id. 7.03.
5. Ark. Stat. Ann. Section 34-2616 (1982).
6. Id.
7. Id.
8. Id.

Members who have legal questions they would like to submit for "diagnosis and treatment" may do so by sending them to: "Legally Speaking", c/o Arkansas Medical Society, Post Office Box 5776, Little Rock, Arkansas 72215.

DOCTOR'S CLINIC AVAILABLE IMMEDIATELY

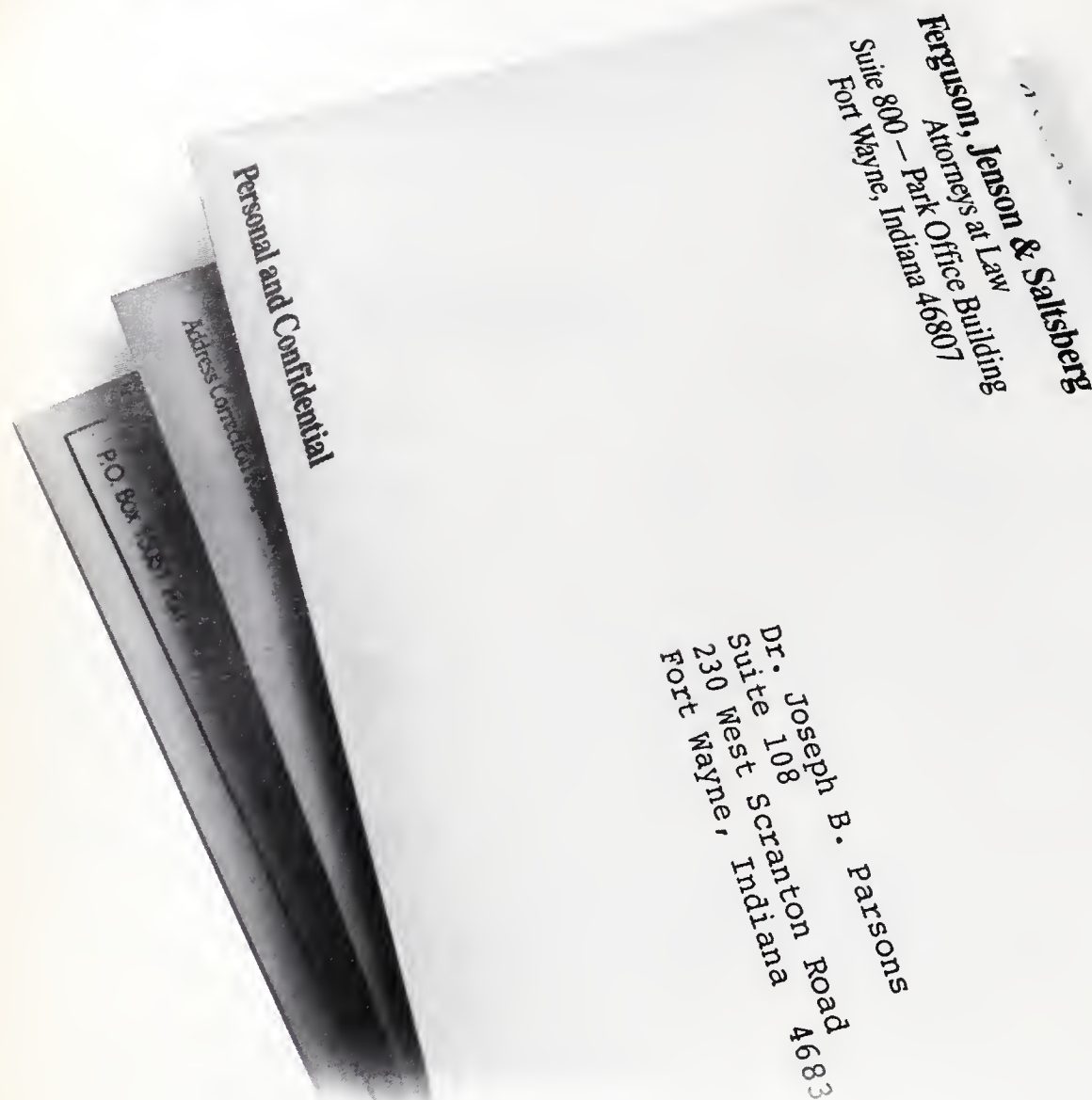
Located minutes from the proposed sites for the new Sherwood Hospital is our Doctor's clinic. It is designed with three exam rooms, three physician's offices, business office, lab-treatment room, procedure's room and a dark room. The clinic has 2,880 square feet ready for immediate occupancy.

North Quarter Plaza offers a Williamsburg design with office/retail space. Located at 9903 Brockington Road, this is one of Sherwood's newest and fastest growing areas! Brockington Road connects Highway 107 with Interstate 67-167 and had a traffic count of approximately 11,000 cars per day.

The following businesses have made North Quarter Plaza their home: Perkins Pharmacy, Crown Jewelry, The New Image Beauty Salon, Mirage Video, and The Cat's Meow. The neighborhood is expanding with 200 single family lots presently available and over 60 homes built within the last year. North Quarter and The Pavilion Apartments have a total of 202 units.

To be a part of the Sherwood Expansion Experience please contact Marcia Stratton, Reed S. McConnell and Associates, at 758-2845 for an appointment to see North Quarter Plaza.

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Why Wouldn't My Doctors Talk To Each Other?

Marion Deutzman

This firsthand narrative describes an elderly woman's three-month ordeal with medical red tape as she went through the painful process of losing an eye. It's published here as a reminder that good medical care must go beyond prompt, accurate diagnosis and treatment. Such care must include clear and full communication - not only between doctors and patients, but also among doctors themselves. Today's competitive, litigious environment underscores that need.

The trouble with my right eye started about five years ago, when I was 62. I began to experience constantly flickering images with blue shadows passing through them. Alarmed, I made an appointment with Dr. Archer, an ophthalmologist in the Long Island, N.Y., town where I live. (I'm not using my physicians' real names.) Dr. Archer suspected a detached retina and referred me to a New York City specialist in retina problems, Dr. Berry. My husband drove me to his office and back - two hours each way in pouring rain.

Dr. Berry concluded that the retina was not detached, but had a crack. He ordered ultrasonograms and fundus photographs and had two more associates examine me. The consensus was that a cyst had developed, but that nothing should be done except to re-examine me periodically. So I saw Dr. Archer, the local ophthalmologist, two or three times a year, and Dr. Berry annually.

By early March 1986, the cyst had grown considerably. "It's now a tumor," Dr. Berry told me. "We have three alternatives: leave it alone, treat it with radiation, or remove the eye. But I certainly don't advise you to do nothing." An

associate of Dr. Berry's who also examined me stated flatly that radiation wouldn't help: the eye would have to come out.

What a shock! It took me a while to accept the harsh reality that my three choices boiled down to one, but I trusted Dr. Berry and wanted him to operate. It turned out, however, that he couldn't because he was shortly going abroad for several weeks. "It's a simple procedure," he said. "Your hometown ophthalmologist should have no difficulty."

"Can the operation possibly be delayed until after July 27, when our son is to be married?" I asked.

"That's four and a half months away," the doctor answered. "It wouldn't be safe to wait that long. Get it done now, and you'll be adjusted to an artificial eye well before the wedding."

Back home, I telephoned Dr. Archer's office. His secretary scheduled the surgery for two weeks later.

Preadmission testing

Meanwhile, his office assistant told me that before the operation I'd need a complete physical exam by my regular doctor and some tests at the local hospital. So I phoned Dr. Cherney, who'd been my internist for about 10 years. His nurse said he'd want the electrocardiogram and chest X-

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rays done in his office, and other tests done at the hospital. She'd ask the hospital to schedule my tests, but I was to remember to tell them about the ECG and X-rays.

When I saw my internist at his office the next day, he was surprised to hear that I was going to lose an eye. I was surprised that doctors apparently don't speak to each other about the patients they share. He examined me and gave me a written report, along with the X-rays and ECG, and I took them to the hospital. After an incredible number of encounters with indifferent and uninformed clerks, I managed to deliver everything to the appropriate departments. I was feeling anxious and depressed.

Presurgical problems

The day I was to be operated on, my husband drove me to the hospital. A nurse showed us to a room with three beds. Both my roommates were very old women, and both seemed very distressed. They were crying loudly, and one of them kept trying to climb over the bed rails. My husband asked the nurse if she could find another room for me. She said she'd try to find something more suitable later.

After my husband left, another nurse spent nearly an hour taking my history. I told her that two things were especially important to me: I had thrombosis, and wanted to be sure I was wearing support stockings during the operation; and I needed to continue taking my hypertension pills. The nurse assured me that she would take care of both matters - but I never did receive my prescribed blood pressure medication while I was in the hospital.

Early that afternoon, I was put on a gurney, taken to another floor, and rolled to the end of a line of patients awaiting surgery. I shivered in the hallway for about 25 minutes before a nurse came to tell me it was my turn in the OR. She explained what was going to be done, and asked whether there was anything I was particularly concerned about. I told her that nobody had given me the support stockings I'd requested. She went and got a pair and put them on me.

After the operation

I awoke in the recovery room with a parched throat, feeling nauseated and extremely weak. Eventually someone wheeled me to another three-bed room. The other occupants, both women about my age, were friendly and considerate.

The evening meal came in a number of small packages which I was too weak to open. I asked a nurse whether I could sit up to eat. She said No; I had to remain at a 30-degree angle and I wasn't to get out of bed. Eventually I managed to unwrap a cup of gelatin, but when I tried to eat it, I started to vomit. One of the other patients called a nurse, who gave me an injection.

My nausea persisted the next day, so I skipped both breakfast and lunch. Early in the afternoon, Dr. Archer came in, removed my bandage, and looked at the operative site. "Okay," he said. "You can go home now."

"But I'm too weak," I protested, shocked. "I'm still not allowed to walk to the bathroom, or even sit up."

"My concern is your eye, which is all right," he said. "If you feel you must stay longer, you'll have to take it up with your internist. The dressing should be changed every day, so I'll arrange for you to have a supply of bandages to take home with you." With that he walked out of the room before I could ask the many questions that were on my mind.

I asked the nurse to phone my internist. A few minutes later, another nurse came in and announced, "We're giving you your walking papers."

"But I haven't seen my regular physician, Dr. Cherney, yet," I said.

"We called his office," she replied. "He wasn't there, but his nurse said that as long as you have no fever and your blood pressure is okay, we can discharge you." Since I was on Medicare, I couldn't help wondering whether being thrown out so soon had anything to do with hospitals' much-publicized effort to help reduce the government's medical-care costs.

Weak, weary, and worried as I was, there was nothing to do but call my husband and ask him to come and take me home. I was too scared to sleep much that night.

The next day, my husband and I removed the bandage. We were completely unprepared for what we found: The orbit was oozing bloody fluid, and the eyelid refused to open. Alarmed, we telephoned Dr. Archer's office. His answering service said he was gone for the day, but someone would get back to us. About an hour later, the service called and reported that the doctor was satisfied that everything was normal, but if I was worried, I could stop by his office the next day. When I did, he told me I was healing nicely. I was to come back in four days. By then the eyelid should be functioning normally again.

Fitting a prosthesis

On my next visit, Dr. Archer gave me the name of a local optician who supplied artificial eyes. I made an appointment for the 13th day following surgery.

He had an artificial eye of the right size, but couldn't match the color of my remaining eye from the stock on hand. He could order another prosthesis, he said, but I'd do better to go directly to the manufacturer, American Optical Corp. in Southbridge, Mass., where an artist would match the color perfectly. He installed the mismatched eye temporarily.

Several days later, the orbit was painfully irritated and still oozing badly. The optician removed the fake eye and told me to come back in five days or so, when the oozing had stopped. I said I'd decided to make the trip to Massachusetts, so he phoned the manufacturer to make an appointment for me. The earliest available time was four weeks away.

On my next visit to the optician, he inserted the temporary eye again, then showed me how to remove it and put it back. I wore it for several weeks. The first time I went out

Before prescribing, see complete prescribing information in SK&F LAB CO. literature or PDR. The following is a brief summary.

Contraindications: There are no known contraindications to the use of 'Tagamet'.

Precautions: While a weak antiandrogenic effect has been demonstrated in animals, 'Tagamet' has been shown to have no effect on spermatogenesis, sperm count, motility, morphology or in vitro fertilizing capacity in humans.

In a 24-month toxicity study in rats at dose levels approximately 9 to 56 times the recommended human dose, benign Leydig cell tumors were seen. These were common in both the treated and control groups, and the incidence became significantly higher only in the aged rats receiving 'Tagamet'.

Rare instances of cardiac arrhythmias and hypotension have been reported following the rapid administration of 'Tagamet' HCl (brand of cimetidine hydrochloride) injection by intravenous bolus.

Symptomatic response to 'Tagamet' therapy does not preclude the presence of a gastric malignancy. There have been rare reports of transient healing of gastric ulcers despite subsequently documented malignancy.

Reversible confusional states have been reported on occasion, predominantly in severely ill patients.

'Tagamet' has been reported to reduce the hepatic metabolism of warfarin-type anticoagulants, phenytoin, propranolol, chlorthalidoxime, diazepam, lidocaine, theophylline and metronidazole. Clinically significant effects have been reported with the warfarin anticoagulants; therefore, close monitoring of prothrombin time is recommended, and adjustment of the anticoagulant dose may be necessary when 'Tagamet' is administered concomitantly. Interaction with phenytoin, lidocaine and theophylline has also been reported to produce adverse clinical effects.

However, a crossover study in healthy subjects receiving either 'Tagamet' 300 mg. q.i.d. or 800 mg. h.s. concomitantly with a 300 mg. b.i.d. dosage of theophylline (Theo-Dur®, Key Pharmaceuticals, Inc.),

demonstrated less alteration in steady-state theophylline peak serum levels with the 800 mg. h.s. regimen, particularly in subjects aged 54 years and older. Data beyond ten days are not available. (Note: All patients receiving theophylline should be monitored appropriately, regardless of concomitant drug therapy.)

Lack of experience to date precludes recommending 'Tagamet' for use in pregnant patients, women of childbearing potential, nursing mothers or children under 16 unless anticipated benefits outweigh potential risks; generally, nursing should not be undertaken in patients taking the drug since cimetidine is secreted in human milk.

Adverse Reactions: Diarrhea, dizziness, somnolence, headache, rash. Reversible arthralgia, myalgia and exacerbation of joint symptoms in patients with preexisting arthritis have been reported. Reversible confusional states (e.g., mental confusion, agitation, psychosis, depression, anxiety, hallucinations, disorientation), predominantly in severely ill patients, have been reported. Gynecomastia and reversible impotence in patients with pathological hypersecretory disorders receiving 'Tagamet', particularly in high doses, for at least 12 months, have been reported. Reversible alopecia has been reported very rarely. Decreased white blood cell counts in 'Tagamet'-treated patients (approximately 1 per 100,000 patients), including agranulocytosis (approximately 3 per million patients), have been reported, including a few reports of recurrence on rechallenge. Most of these reports were in patients who had serious concomitant illnesses and received drugs and/or treatment known to produce neutropenia. Thrombocytopenia (approximately 3 per million patients) and a few cases of aplastic anemia have also been reported. Increased serum transaminase and creatinine, as well as rare cases of fever, interstitial nephritis, urinary retention, pancreatitis and allergic reactions, including hypersensitivity vasculitis, have been reported. Reversible adverse hepatic effects, cholestatic or mixed cholestatic-hepatocellular in nature, have been reported rarely. Because of the predominance of cholestatic features, severe parenchymal injury is considered highly unlikely.

A single case of biopsy-proven periportal hepatic fibrosis in a patient receiving 'Tagamet' has been reported.

How Supplied: Tablets: 200 mg. tablets in bottles of 100; 300 mg. tablets in bottles of 100 and Single Unit Packages of 100 (intended for institutional use only); 400 mg. tablets in bottles of 60 and Single Unit Packages of 100 (intended for institutional use only), and 800 mg. Tiltab® tablets in bottles of 30 and Single Unit Packages of 100 (intended for institutional use only).

Liquid: 300 mg./5 ml., in 8 fl. oz. (237 ml.) amber glass bottles and in single-dose units (300 mg./5 ml.), in packages of 10 (intended for institutional use only).

Injection:

Vials: 300 mg./2 ml. in single-dose vials, in packages of 10 and 30, and in 8 ml. multiple-dose vials, in packages of 10 and 25.

Pre-filled Syringes: 300 mg./2 ml. in single-dose pre-filled disposable syringes.

Plastic Containers: 300 mg. in 50 ml. of 0.9% Sodium Chloride in single-dose plastic containers, in packages of 4 units. No preservative has been added.

ADD-Vantage® Vials: 300 mg./2 ml. in single-dose, ADD-Vantage® Vials, in packages of 25.

Exposure of the premixed product to excessive heat should be avoided. It is recommended the product be stored at controlled room temperature. Brief exposure up to 40°C does not adversely affect the premixed product.

'Tagamet' HCl (brand of cimetidine hydrochloride) injection premixed in single-dose plastic containers is manufactured for SK&F Lab Co. by Travenol Laboratories, Inc., Deerfield, IL 60015.

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BRS-TG-L73B

Date of issuance Apr. 1987

SK&F LAB CO.

Cidra, P.R. 00639

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In peptic ulcer:

RELIEF REASSURANCE REWARD

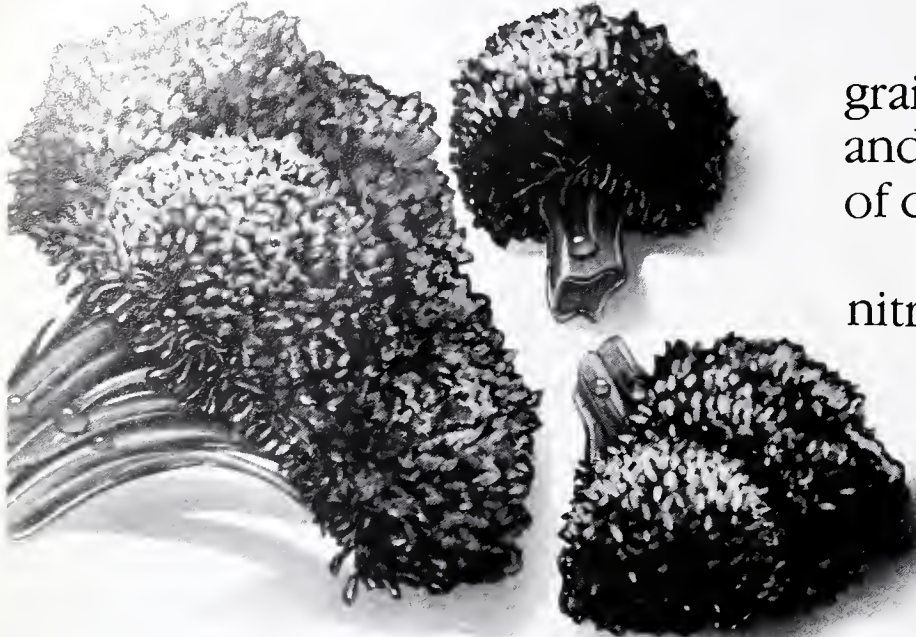


Tagamet[®]
brand of cimetidine
First to Heal

You'll both feel good about it.

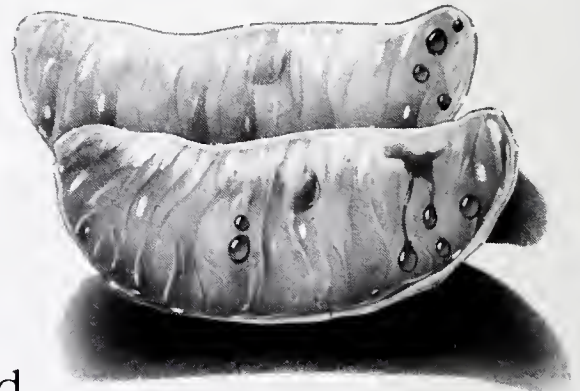
RESULTS

A defense against cancer can be cooked up in your kitchen.



Fruits, vegetables, and whole-grain cereals such as oatmeal, bran and wheat may help lower the risk of colorectal cancer.

Foods high in fats, salt- or nitrite-cured foods like ham, and



There is evidence that diet and cancer are related. Some foods may promote cancer, while others may protect you from it.

Foods related to lowering the risk of cancer of the larynx and esophagus all have high amounts of carotene, a form of Vitamin A which is in cantaloupes, peaches, broccoli, spinach, all dark green leafy vegetables, sweet potatoes, carrots, pumpkin, winter squash and tomatoes, citrus fruits and brussels sprouts.



fish and types of sausages smoked by traditional methods should be eaten in moderation.

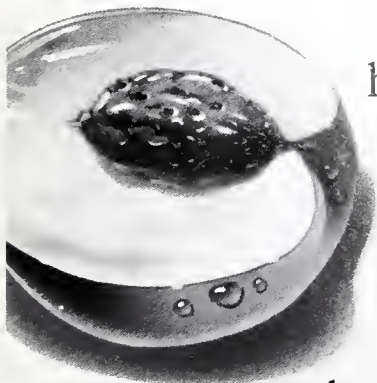
Be moderate in consumption of alcohol also.

A good rule of thumb is cut down on fat and don't be fat.

Weight reduction may lower cancer risk. Our 12-year study of nearly a million Americans uncovered high cancer risks particularly among people 40% or more overweight.

Now, more than ever, we know you can cook up your own defense against cancer. So eat healthy and be healthy.

No one faces
cancer alone.



Foods that may help reduce the risk of gastrointestinal and respiratory tract cancer are cabbage, broccoli, brussels sprouts, kohlrabi, cauliflower.

Since my doctors weren't talking to each other about my case, I was caught in the middle, forced to cope with matters I didn't understand.

with it I had the feeling that everyone was staring, so I began avoiding people as much as possible.

We kept our appointment at American Optical. The man who did the fitting was gentle and exceedingly thorough. Afterward, he called in an artist to duplicate the color of my other eye. The fitting and colormatching took six hours.

These men were as considerate as anyone I encountered during my whole ordeal. Unlike most of my doctors, they treated me as a person, rather than just another case. They patiently explained how to take care of the artificial eye, answered all my questions in detail, and did everything they could to make my husband and me comfortable - even arranging for us to have a good lunch in their company cafeteria.

It took me several days to adjust to the new eye, but I soon began to feel better, eat better, and sleep better.

More bad news

On a follow-up visit to the local ophthalmologist eight weeks after surgery, I asked - as I had several times before - whether he'd received a report from the specialized pathology lab where the tumor had been sent for analysis. This time Dr. Archer answered Yes. The tumor was malignant. My heart sank.

Dr. Archer consulted with Dr. Berry, the New York City retina specialist, who said that most tumors of this type were confined to the eye. Still, Dr. Berry felt I ought to have a workup, just to be on the safe side. I told Dr. Archer I didn't know what a workup was and couldn't understand the need for it. He said I should talk with Dr. Berry myself.

For three days I tried unsuccessfully to reach the retina specialist by telephone. His receptionist kept promising that he'd return my calls, but he never did. Finally, she told me she'd spoken with him about me, and he'd suggested that Dr. Davidson, an oncologist in the city, might be able to perform the workup. She gave me his telephone number.

Dr. Davidson's receptionist gave me a tentative appointment for 10 days later. But, she warned, he wouldn't see me unless he received a biopsy report and slides from my surgeon at least five days in advance.

I knew Dr. Archer didn't have the slides yet, but I called his office anyway. His receptionist advised me to ask the hospital to obtain them from the lab where the tumor had been examined.

All this was too much. I lost my temper and demanded to know why my doctors didn't communicate with each other directly. Under these circumstances, I said, a person with blood pressure as high as mine would be lucky not to suffer a stroke. In an effort to calm me, the receptionist offered to try to locate the slides herself. She called back later to say she'd been successful: The hospital would have the lab send them directly to Dr. Davidson.

Incredibly, several days before my appointment, Dr. Davidson's receptionist phoned to ask why I wanted to see him. When I explained again, she said the doctor had received the report and slides and felt there was no reason to see me; apparently all the malignancy had been removed. If Drs. Archer and Berry wanted further tests, they should have them done locally.

By this time I was fuming. Dr. Archer had told me to call Dr. Berry for an explanation of what was going on; Dr. Berry's receptionist wouldn't let me speak with him, and told me to call Dr. Davidson instead; and now Dr. Davidson was asking why I wanted to see him. Why, indeed!

The matter was settled when Dr. Davidson's receptionist arranged for me to see my internist, Dr. Cherney, who would set up any tests he thought necessary and relay the results to Dr. Davidson. Dr. Cherney ordered blood tests, a bone scan, and orbital magnetic resonance imaging. I was worried sick about what these tests might reveal.

The bone scan at the hospital took a long time. I was just starting to leave when the technician stopped me. He wanted to check the results while I was there, he said. After doing so, he decided to repeat a few of the head scans. As I lay under the machine again, I could see him conferring with two other people and pointing to something on an X-ray film. What was wrong? I got more and more nervous as they continued to whisper among themselves.

At last the technician told me I was finished. By the time I got home, I'd convinced myself that they'd found something really bad, and that I wouldn't make it to my son's wedding, now just two months away.

I telephone Dr. Cherney that evening to get the results of all my tests. He said the magnetic imaging test was "clean," and the liver and blood tests indicated no problems. As for the bone scan - the test I was most worried about - he hadn't received a report yet. While I waited, he called the hospital on another phone and was told the findings were normal. I cried with relief.

Amid my consternation, I kept getting bills from physicians, hospitals, laboratories, and technicians. I didn't even know what some of them were for. I received several statements marked "second notice" from people who hadn't sent a *first* notice. I found the explanation of benefits from Medicare and my private health insurance almost impossible to understand. None of the doctors offered

assistance with this. Long after my son's wedding, my husband and I were still struggling with the forms and notices.

Looking back

I have no complaints about the quality of the medical care I received, but I do resent the way it was provided. Virtually everyone I had contact with - including my physicians - treated me as though I were an object to be pushed this way and that. Hardly anyone seemed to care how I was feeling. I was fortunate to have an understanding husband and a few caring friends to reassure me.

My internist had always advised my to avoid stress because of my hypertension. The tumor was plenty stressful,

but the worst moments I experienced were brought on by physicians and hospital personnel who made no attempt to explain what was happening, to encourage me, or to calm my fears. I was caught in the middle, forced to cope with matters I didn't understand.

Ideally, I suppose, one physician should have assumed the overall management of my care, coordinating tests, explaining procedures to me, and assuring me that someone knew and cared what was happening to me. Unfortunately, neither my internist nor my local ophthalmologist saw that as his role. If one of them had - and if doctors in general would offer more understanding and support to their patients - traumatic situations like mine would be easier to bear.



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Annular Pancreas Associated with Cross-fused Ectopic Kidney

Robert J. Manning, M.D.*

A case of annular pancreas associated with a cross-fused ectopic kidney is reported. A computerized review of the English language literature through 1986 shows no previously reported cases of annular pancreas with cross-fused ectopic kidney as an associated congenital anomaly. Disease was present only in the kidney, which was hydronephrotic secondary to prostatic obstruction. Other reported congenital anomalies associated with annular pancreas in childhood and adult life are listed. Embryology of fused kidneys is reviewed and related to the present case report.

Introduction

Annular pancreas is the most common anomaly obstructing the duodenum in infancy. However, annular pancreas may not become symptomatic until late in life. It may present then with obstructive symptoms such as nausea, vomiting, and weight loss. The common radiographic picture is that of dilatation of the stomach and that part of the duodenum proximal to the ring of constricting ectopic pancreatic tissue.¹ This is the familiar "double-bubble" sign. Indeed annular pancreas may be present during all of adult life without producing symptoms, and thus may be only an incidental finding at surgery or autopsy.² This paper reports such a case in which a previously unsuspected annular pancreas was found in an elderly man. Disease was present only in a previously unreported associated congenital anomaly, a cross-fused ectopic kidney. The annular pancreas was an incidental finding in the patient. It was diagnosed non-invasively by computerized tomographic (CT) scan of the abdomen and pelvis.

Case Presentation

A 73-year-old male presented initially with symptoms of recurring, intermittent, vaguely described abdominal pain for two months. The location of the pain was sometimes in the upper abdomen and sometimes in the lower abdomen. It was associated with mild weight loss of 4.5 kg and a subjective feeling of weakness. A barium enema had been done several months prior to admission and was normal. An enlarged prostate gland was palpated two months prior to admission, however, at that time he denied difficulty voiding. An upper gastrointestinal (UGI) series done one month prior to admission showed constriction of the descending duodenum and was interpreted as consistent with old ulcer disease. He was treated with cimetidine (Tagamet) without change in symptoms. During the four days prior to admission, he complained of constant diffuse lower abdominal pain. He noticed difficulty voiding, and finally was able to urinate only a few drops at a time.

Physical exam was remarkable only for minimal epigastric tenderness, a 10 cm bulging but soft area below the umbilicus, and an enlarged prostate. His blood count (CBC) and electrolytes were normal at admission, however, his blood urea nitrogen (BUN) and creatinine were elevated at 78 and 4.9 mg/dL respectively. A Foley catheter was inserted, resulting in the return of 1 liter of clear residual urine. Urine culture showed no growth. His BUN and creatinine values fell to 27 and 1.3 mg/dL respectively by the fourth hospital day. Conventional liver tests including alanine aminotransferase (ALT), aspartate aminotransferase (AST), alkaline phosphatase, and bilirubin were normal. Serum amylase was normal.

Ultrasound of the abdomen was suggestive of a possible soft tissue mass in the lower abdomen. Intravenous pyelogram (IVP) with nephrotomograms showed a cross-fused kidney ectopically located in the right lower quadrant of the abdomen. The kidney was hydronephrotic and there was bladder wall thickening and trabeculation. An UGI series was repeated and showed no change from the previous study. There were several areas of concentric narrowing in

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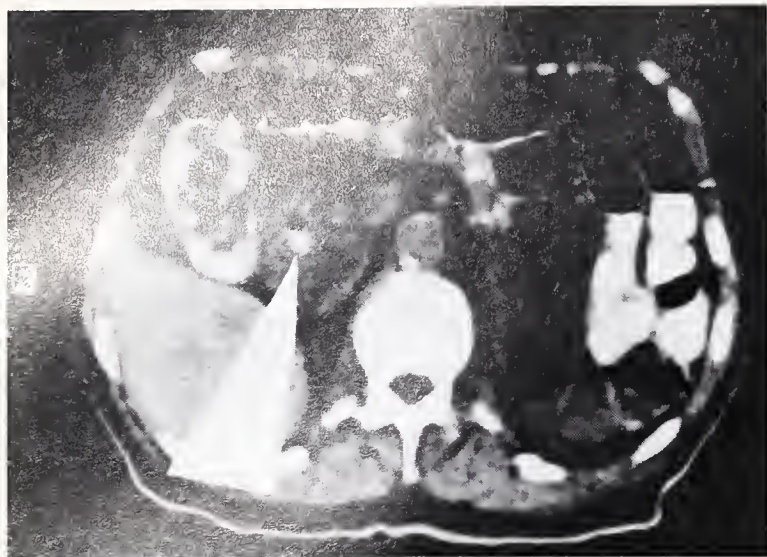


Figure 1. Annular pancreas surrounding contrast-filled descending duodenum.

the descending duodenum, but there was no evidence of obstruction.

Because of continued concern about his history of mild weight loss associated with intermittent vague abdominal distress, a CT scan of the abdomen and pelvis with simultaneous administration of oral contrast material (Gastrograffin) was done. This study showed an enlargement of the head of the pancreas, which clearly surrounded the descending duodenum filled with oral contrast material, diagnostic of annular pancreas (Figure 1). The body and tail of the pancreas had normal configuration. The cross-fused ectopic kidney was again noted in the right lower abdomen (Figure 2). Transurethral resection of the prostate (TURP) was performed in two stages, once on the sixth hospital day, and again on the eighth hospital day. The patient made an uneventful recovery and was discharged seven days later in good condition. After discharge his weight stabilized and he still complained of intermittent vaguely described abdominal pain. This was thought to represent functional bowel distress and had no relation to his annular pancreas.

Case Discussion

In a review of the literature of 266 cases of annular pancreas,¹ all cases had been confirmed at surgery or autopsy. Recently, however, there have been numerous reports of the non-surgical diagnosis of annular pancreas by endoscopic retrograde cholangiopancreatography (ERCP). ERCP can demonstrate the duct of the ectopic ring of pancreatic tissue encircling the duodenum.³⁻⁶ Most cases of annular pancreas found by ERCP have occurred in the clinical setting of intrinsic pancreatic disease, usually acute or chronic pancreatitis. In the present case report there was no evidence of any intrinsic disease of the pancreas. Neither were there any obstructive symptoms.

Over the past several years, it has been recognized that adult annular pancreas may be diagnosed entirely non-invasively by means of CT scan with simultaneous administration of oral contrast material. This will demonstrate the

ectopic ring of pancreatic tissue surrounding a contrast-filled, usually stenotic, descending duodenum.⁷⁻⁹ The present case is another example of this non-invasive method of diagnosis. CT scan with simultaneous administration of oral contrast material has become the procedure of choice, if annular pancreas is clinically suspected in the adult.

At least 50 percent of cases of annular pancreas have associated congenital anomalies.¹ In children there is a high incidence of Mongolism (from 30 to 40 percent of cases). In addition there is a high associated incidence of intestinal malrotation, duodenal atresia, cardiac defects, tracheoesophageal fistula, imperforate anus, and Meckel's diverticulum. Other less frequent associated congenital anomalies in the pediatric population are cryptorchidism and spinal defects (e.g., spina bifida). There has been one reported case each of associated agenesis of the right lung, urethral stenosis, polydactyly, and absent left kidney.¹ Two cases of horseshoe kidney have been reported.^{1,10}

Approximately one out of 1,000 persons has some type of renal fusion, the most common being horseshoe kidney.¹¹ The fused renal mass almost always contains two excretory systems and therefore two ureters. The renal tissue may be equally divided between the two flanks, or the entire mass may be on one side. Even in the latter case, the two ureters open at their proper places into the bladder.¹¹

Fusion of the two metanephroi occurs early in embryonic development, when the kidneys lie low in the pelvis. For this reason, they seldom ascend to the high position which normal kidneys assume.¹¹ They may even remain in the true pelvis. On rare occasions, the two nephric masses are fused into one mass ("cake" kidney), as in the present case report. The mass may lie in the midline (usually in the true pelvis). It may, however, lie in one flank or in one side of the pelvis. In this case one ureter crosses the midline to open into the bladder at the proper point. This defines crossed renal ectopy with fusion.¹¹ The present case report represents an example of this rare phenomenon.

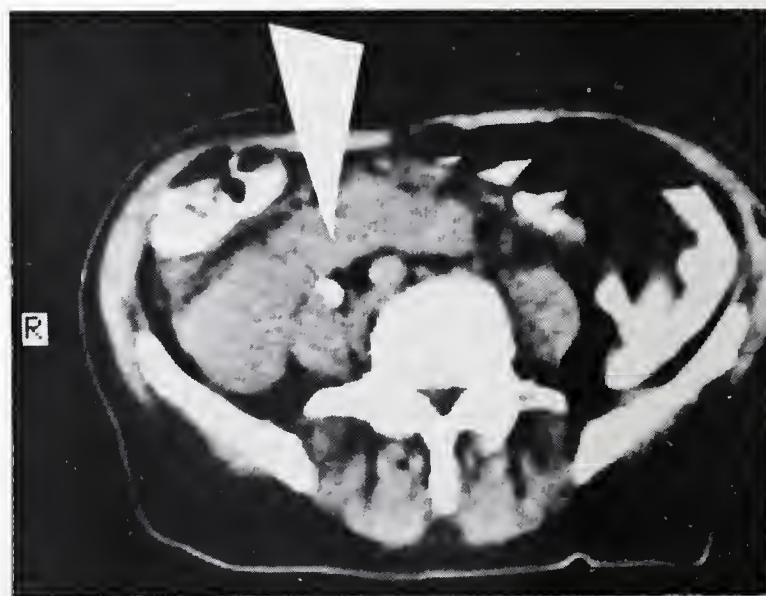


Figure 2. Cross-fused ectopic kidney in right lower abdomen.

Conclusion

In adults the most common congenital anomaly is duodenal atresia, although two cases of intestinal malrotation have been reported.¹ A computerized search of the English language literature through 1986 revealed no previous reports of an associated cross-fused ectopic kidney. In the present case report, the patient had disease (hydronephrosis secondary to prostatism) only in the associated congenital anomaly, the cross-fused ectopic kidney. The annular pancreas was an asymptomatic incidental finding.

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ELECTROCARDIOGRAM OF THE MONTH

Gil Johnson, M.D.
John W. Watson, M.D.
UAMS Division of Cardiology
Little Rock, Arkansas

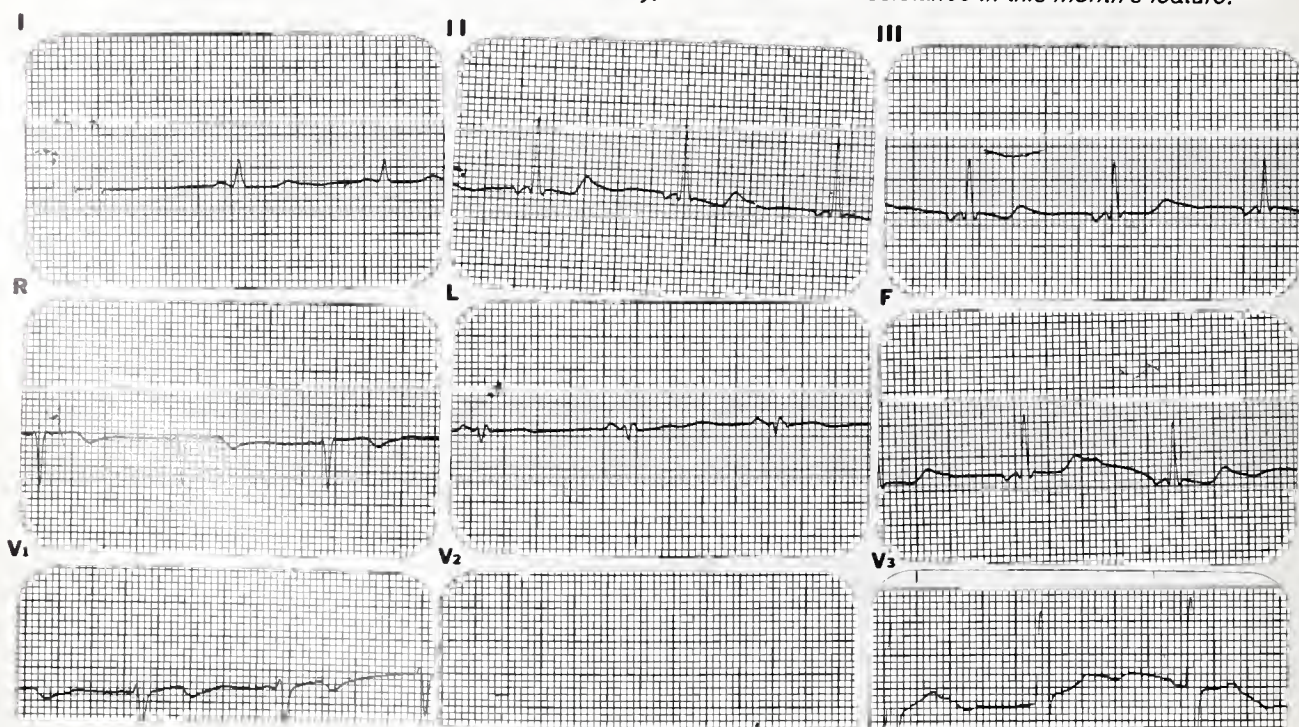
CLINICAL HISTORY:

G. R. is a 49-year-old man who had presented for a routine physical examination. He has no cardiac symptoms. On examination, he had a soft first heart sound and a murmur of aortic regurgitation. His ECG is shown. What do you think?

DISCUSSION:

The PR interval is less than 0.12 seconds and the P waves are inverted in leads II, III, and AVF. U waves are noted as well as nonspecific ST-T changes. There is no strong electrocardiographic evidence for left ventricular hypertrophy. The cardiac mechanism is a "coronary sinus rhythm" which most probably is a low atrial or high junctional rhythm. It is unrelated to his A.R. The soft first heart sound is secondary to the short PR interval. In this situation, the mechanism should be viewed as an electrocardiographic curiosity and does not call for therapy.

The editor wishes to thank Dr. Johnson of Conway, Arkansas for his assistance in this month's feature.



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Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalamic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon[®] is indicated as a sympatholytic and mydriatic. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.^{1,2} Also dizziness, headache, skin flushing reported when used orally.^{1,3}

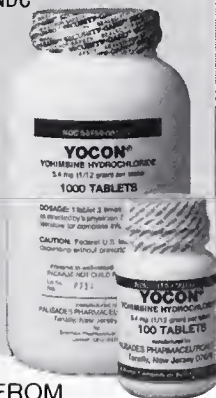
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.^{1,3,4} 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to 1/2 tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.³

How Supplied: Oral tablets of Yocon[®] 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

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BRIEF SUMMARY

CONTRAINDICATIONS

There are no known contraindications to the use of sucralfate.

PRECAUTIONS

Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

Drug Interactions: Animal studies have shown that the simultaneous administration of CARAFATE with tetracycline, phenytoin, or dimetidine will result in a statistically significant reduction in the bioavailability of these agents. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. The clinical significance of these animal studies is yet to be defined.

Carcinogenesis, Mutagenesis, Impairment of Fertility: No evidence of drug-related tumorigenicity was found in chronic oral toxicity studies of 24 months' duration conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies have not been conducted.

Pregnancy: Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients, adverse effects were reported in 121 (4.7%). Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

DOSAGE AND ADMINISTRATION

The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

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Recurrent Subluxation of the Shoulder

*Philip H. Johnson, M.D.**

Introduction

Instability of the glenohumeral joint may occur anteriorly, posteriorly or multi-directionally. Anterior subluxation is seen with significant regularity and is now considered to be a specific syndrome.

History

Recurrent anterior dislocation of the shoulder is a painfully dramatic clinical occurrence. Patients present in the emergency room for physicians to relocate the humeral head. Recurrent subluxation of the shoulder is, however, frequently subtle. Our understanding of this entity has been evolving over the past 60 years.

Bankart, in 1923, described the typical anatomic lesion for recurrent dislocation.¹ He described a tearing of the fibrocartilaginous labrum from the anterior glenoid and neck of the scapula. This has since been referred to as the "Bankart lesion." As the humeral head exits anteriorly, chips of bone from the anterior glenoid may be fractured or avulsed by the labrum. Rowe and Zarins classified Bankart lesions into three types: Type I, simple separation of the labrum from the anterior glenoid; Type II, avulsion of a small fragment of bone with the labrum; and Type III, fracture of the anterior glenoid representing greater than one-eighth of its width.² Variations, therefore, of the Bankart lesions are common. Bankart, in 1938, illustrated in detail the pathology of recurrent anterior dislocation and his surgical capsulorrhaphy.³

It was not until 1969 that Blazina and Satzman described 34 patients with 37 unstable shoulders who experienced painful "slipping out."⁴ They are credited with initiating

interest in subluxation as a distinct clinical entity. At surgery, 66% demonstrated a Bankart lesion.

Rockwood, in 1976, presented a series of 184 subluxing shoulders.⁵ He classified them in four categories:

- I. Traumatic subluxation without previous dislocation
- II. Traumatic subluxation after previous dislocation
- III. Atraumatic voluntary subluxation
- IV. Atraumatic involuntary subluxation

This all-inclusive classification has helped distinguish between traumatic and atraumatic etiologies. It also helped point out the presence of subluxation without previous dislocation. Rockwood found the same basic pathology in traumatic subluxation with and without previous dislocation and recommended the same surgical reconstructive procedure. He recommended physical therapy and only occasional surgery for atraumatic involuntary subluxation. He recommended only rehabilitation for voluntary subluxation, suggesting these patients may have emotional problems.

Protzman, in 1980, presented 80 cases of anterior instability of the shoulder and categorized them in three types: Type I, 50 patients with subluxing shoulder which had never been dislocated; Type II, 20 shoulders which experienced both recurrent subluxation and dislocation; and Type III, 10 shoulders which demonstrated recurrent dislocation without previous episodes of subluxation.⁶ It is obvious that, along with patients with recurrent dislocation, there are many others who experience the instability of both subluxation and dislocation. It should be noted that the majority of Protzman's cases were subluxing shoulders which had never been dislocated.

In 1980, Rowe and Zarins described their experience with 60 shoulders with recurrent transient subluxation.²

*Little Rock Orthopaedic Clinic, Post Office Box 5270, Little Rock, Arkansas 72215.

What is most interesting about their cases is that in 55% the patients were not even aware of shoulder subluxation. These patients experienced "dead arm" syndrome. They felt a sharp, paralyzing shoulder pain when attempting to throw or serve tennis from a position of abduction and full external rotation. Trauma was the causative agent in 86% of these cases. Fifty-eight percent of these were caused by trauma with external rotation and abduction; 28% occurred as a result of a direct blow to the shoulder, usually posterior, forcing the head anteriorly. The remaining 14% were due to excessive throwing or hard servicing in tennis. At the time of surgery, 64% demonstrated a Bankart lesion. Half of these patients were never aware of shoulder subluxation. Sixty percent had positive "apprehension tests."

Diagnosis

The diagnosis for recurrent subluxation is made when there are characteristic "dead arm" symptoms, a typical history of injury, and a positive "apprehension test." This test may be performed in three ways.

Number One. The patient is seated with the elbow at ninety degrees and with the shoulder abducted and externally rotated. The patient's wrist is held in one hand and the thumb of the examiner's opposite hand is used to apply an anterior force to the posterior humeral head. An abrupt pain and apprehension of possible subluxation is experienced.

Number Two. The patient is again seated with the shoulder in abduction and external rotation. The patient's wrist is held in the axillae of the examiner with one of his hands anterior and the other hand posterior to the humeral head. In this manner, passive anterior excursion of the humeral head can be appreciated and apprehension elicited.

Number Three. The patient is supine with the arm off the table. The shoulder is again placed in abduction and external rotation. One of the examiner's hands supports the suspended wrist while the fingers of the hand are placed under and behind the humeral head. An upward, anterior force is applied to the humeral head, as the shoulder is externally rotated, producing pain and apprehension.

X-rays are helpful in diagnosis when they demonstrate bony changes about the glenoid. Hastings and Coughlin demonstrated x-ray changes in 34 of 50 shoulders with recurrent subluxation.⁷ Twenty showed changes in the inferior glenoid on AP films, usually consisting of "fuzzy loss of cortical definition." Eight showed bony irregularity or fracture of the anterior glenoid. This was best seen on modified axillary (West Point) films.⁸ Seven showed a small Hill-Sachs defect in the humeral head. Arthrotomograms have been helpful in demonstrating subtle changes in the anterior labrum not seen on axillary lateral x-rays.^{9,10} CT arthrograms demonstrate similar changes in the transverse plane.

Final diagnosis is made by examination of the shoulder under anesthesia.⁷ With the patient in the supine position,

his hand and wrist are held in the examiner's axillae. His arm is positioned in 100 to 120 degrees of abduction, twenty degrees of flexion, and sixty degrees of external rotation. The humerus is then grasped in both hands and excursion of the humeral head is tested anteriorly, inferiorly, and posteriorly. Varying the degree of abduction, stresses a different portion of the anterior capsule. In this way, the passive excursion of the humeral head in the glenoid is evaluated. Normally there is no displacement of the humeral head anteriorly. Posteriorly, the head may be displaced 50% in the normal shoulder. If any anterior displacement of the humeral head is noticed, subluxation is occurring. Always compare with the asymptomatic side.

Differential Diagnosis

Impingement Syndrome. The most common shoulder malady seen by the orthopedist is impingement syndrome, with all its manifestations.¹¹ On physical examination, a positive "impingement sign" is seen. The examiner stands to the side of the patient, slowly flexing his shoulder and arm to the overhead position. The patient experiences pain as the supraspinatus tendon is compressed between the humeral head and acromion. The presence of the "confirmatory impingement sign" helps affirm the diagnosis. With the patient's shoulder in ninety degrees forward flexion, the humeral head is internally rotated. This motion rolls the greater tuberosity into the bony ledge of the anterior acromion, producing pain. The injection of ten ccs. of one percent Xylocaine under the anterior lip of the acromion, into the subacromial bursa relieves pain. This is referred to as the "impingement test." Obliteration of pain during the performance of the impingement sign is diagnostic of impingement syndrome.

Tears of the Glenoid Labrum. Glenoid labrum tears produce pain and popping within the shoulder joint similar to a torn meniscus in the knee. Mosely and Overgaard beautifully described variations in the anatomy of the glenoid labrum.¹² One variation depicts the labrum of the shoulder as a meniscus. This may be torn in a fashion similar to the meniscus of the knee, producing painful popping. Other anatomic variations show the labrum originating from the bony rim of the glenoid blending in a continuous sheet with the anterior capsular ligaments. Tears of the glenoid labrum, therefore, may or may not be associated with glenohumeral instability; much like a torn meniscus in the knee may be associated with anterior cruciate instability. Arthroscopic resection of a torn labrum may eliminate popping and pain and allow instability to continue. The Andrew's "clunk test" is used to make a clinical diagnosis. The patient is placed in a supine position with his arm in the full overhead position. One of the examiner's hands is placed behind the shoulder lifting up, while the other rotates the humerus. A clunk is felt as the labral fragment pops against the rotating head. Arthrotomography may be helpful in making the diagnosis. Arthroscopy is used to make the final diagnosis.

Thoracic Outlet Syndrome and Cervical Disc Disease. Both of these entities must be considered when the shocking pain of "dead arm" syndrome occurs. Each involves either nerve root or brachial plexus impingement. A careful neurologic examination of the upper extremity should suggest either nerve root compression from a cervical disc or brachial plexus impingement from thoracic outlet syndrome. Subclavian or axillary artery compression in the thoracic outlet may also produce signs and symptoms in the forearm and hand.

Treatment

Conservative measures are usually unsuccessful when treating typical shoulder subluxation.² Muscle strengthening exercise and avoidance of overhead activities will be beneficial if the patient is willing to give up the strenuous overhead activities which produce symptoms. Conservative treatment has been recommended by Rockwood only for the subluxing shoulders without a history of trauma.⁵ He recommends surgery for subluxing shoulders of traumatic origin.

The same surgical procedures used for recurrent dislocation are successful for treating traumatic shoulder subluxation. Surgical reconstruction of the anterior shoulder by the Bankart capsulorrhaphy, as originally described, is the most popular procedure.³ We have also had excellent success with the Bristow procedure. This consists of transfer of the tip of the coracoid process with the muscles of origin of the short head of the biceps and the coracobrachialis to the anterior rim of the glenoid. This produces an anterior bone block but, more important, a tendinous sling guards

the anterior shoulder when the arm is in a position of abduction and external rotation.

Summary

Recurrent anterior subluxation of the shoulder is a distinct clinical entity. It is usually caused by a traumatic forceful external rotation of the shoulder without frank dislocation. The majority of patients are unaware that their shoulder is slipping and manifest sudden sharp pain with the throwing motion ("dead arm" syndrome). Diagnosis is made by recognizing the characteristic symptoms and eliciting a positive apprehension test. The diagnosis is supported by anterior glenoid changes on the modified axillary x-rays and arthrotomography. Good results are obtained with the surgical procedure customarily carried for recurrent shoulder dislocation.

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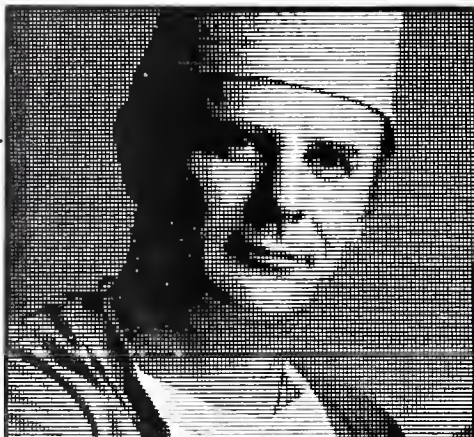
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Ovarian Cancer: A Brief Overview

*Fernando Padilla, M.D. and Craig Gilliam, B.S.M.T.**

Cancer of the ovary is the third most common gynecologic malignancy in the United States. However, it is the most common cause of death from gynecologic neoplasms. Approximately 17,000 new cases of ovarian cancer are diagnosed each year; 11,500 of these die of the disease. Approximately 60%-70% of all patients present with advanced disease not amenable to surgery and poorly responsive to radiotherapy. In the remaining, even when properly treated, there is a 30% recurrence rate.¹

Histopathology

Most ovarian cancers (approximately 90%) are epithelial tumors, subdivided into benign, borderline and malignant. Germ cell tumors are rare and include dysgerminomas, embryonal carcinomas, choriocarcinoma, teratomas, and endodermal sinus tumors. Over 65% of the patients with germ cell tumors are under 20 years of age.² Other ovarian cancers may be classified as stromal tumors, sarcomas, or other rare types including metastatic.

Two points need to be emphasized. First, histology is an important prognostic sign. It is important to know whether the tumor looked benign, borderline or malignant. Borderline tumors will often do well without postoperative treatment. On the other hand, malignant tumors will be the ideal candidates for some form of adjuvant chemotherapy. Second, approximately 4%-8% of cancers of the ovary are metastatic.

Staging

Table I outlines the staging for ovarian cancer according to the International Federation of Gynecology and Obstetrics (FIGO) system. Stage I growth is limited to the ovaries; stage II extends to the pelvis; stage III involves metastatic spread outside the pelvis; and stage IV involves distant metastases, particularly to the liver.

In a study from the Ovarian Cancer Study Group (OCSG), 100 patients with a previous diagnosis of stage IA-IIB cancer were re-evaluated.¹ The evidence from the study indicated significant understaging; 31 of 100 cases had a more advanced stage and 23 or 31 cases actually had stage III disease. Therefore, thorough operative staging is crucial to properly evaluate these patients. In addition, cytoreductive surgery prior to chemotherapy and "second look" surgery after chemotherapy have been found invaluable in the proper evaluation of patients who receive chemotherapy.

Early Stage (I & II Treatment)

From the literature reviewed, optimal treatment for cancer confined to the pelvis is still undetermined. High failure rates after surgery with or without radiation therapy are almost always due to occult abdominal metastases and unsuspected positive para-aortic nodes, which were not carefully checked at the time of the surgery. Adjuvant therapy, if it is to succeed, must encompass the entire pelvic and abdominal area. Some physicians suggest that some form of adjuvant chemotherapy should be used. Below, some of the better representative studies are summarized.

In a prospective study from M. D. Anderson Hospital, 149 patients were randomized, including 43 stage I patients. Total abdominal radiation therapy with pelvic boost was given to 70 patients and compared to melphalan, given to 79 patients. The two-year survival rates were 90% for melphalan and 85% for radiation therapy. Chemotherapy had fewer side effects and was less expensive than radiation.⁴

In a randomized prospective study from the Gynecologic Oncology Group (GOG) on stage IA and IB ovarian cancer, one group of patients received pelvic radiation therapy (5000 rads for 5-6 weeks); another group received oral melphalan (0.2 mg/kg/day for 5 days every 4 weeks for 18 months); and another group receive no treatment. Recurrence was highest for pelvic radiation (30%) and lowest for melphalan (6%).⁵

*St. Vincent Infirmary Cancer Center, Two St. Vincent Circle, Little Rock, Arkansas 72205.

TABLE I. FIGO CLASSIFICATION OF OVARIAN CARCINOMA³

Stage	I	Growth limited to the ovaries.
	IA	Growth limited to one ovary; no ascites.
IB	I.	No tumor on the external surface; capsule intact.
	II.	Tumor present on the external surface and/or capsule ruptured.
		Growth limited to both ovaries; no ascites.
	I.	No tumor on the external surface; capsule intact.
IC	II.	Tumor present on the external surface and/or capsule(s) ruptured.
		Tumor either stage IA or stage IB, but with ascites* present or positive peritoneal washings.
Stage	II	Growth involving one or both ovaries with pelvic extension.
	IIA	Extension and/or metastases to the uterus and/or tubes.
	IIB	Extension to other pelvic tissues.
	IIC	Tumor either stage IIA or stage IIB, but with ascites* present or positive peritoneal washings.
Stage	III	Growth involving one or both ovaries with intraperitoneal metastases outside the pelvic and/or positive retroperitoneal nodes. Tumor limited to the true pelvis with histologically proven malignant extension to small bowel or omentum.
Stage	IV	Growth involving one or both ovaries with distant metastases. If pleural effusion is present, there must be positive cytology to allot a case to stage IV. Parenchymal liver metastases equals stage IV.
Special category		Unexplored cases which are thought to be ovarian carcinoma.

* Ascites peritoneal effusion which in the opinion of the surgeon is pathologic and/or clearly exceeds normal amounts.

In a study from the Princess Margaret Hospital, 190 patients with stage IB, II, and III ovarian cancer were randomized to receive pelvic radiation therapy versus pelvic radiation therapy followed by chlorambucil versus pelvic plus abdominal radiation. No difference in survival was noted.⁶

In summary, four points can be made about the treatment of early stage ovarian cancer: (1) Accurate staging is crucial for deciding which patients should receive adjuvant therapy. (2) Patients with stage IA-IB ovarian cancer with well or moderately-well differentiated histology have fairly good prognoses and may not require any adjuvant therapy. (3) Good candidates for adjuvant therapy are those patients with stage IB-IIC ovarian cancer because of 20% chance of recurrence and 12% death rate in the first two years after surgery. (4) The best adjuvant therapy, if any is indicated, is still undetermined.

Advanced Stage (III & IV) Treatment

Melphalan is the standard by which every other drug in the treatment of advanced ovarian cancer is measured. It has a 31%-64% response rate.⁴ The median survival for all patients with cancer of the ovary is 10-14 months; responders to melphalan survive 17-22 months. From 0%-9% of all patients survive 5 years with ovarian cancer; 16%-22% of those who respond to melphalan survive 5 years.

Other agents in the treatment of advanced ovarian cancer are doxorubicin (Adriamycin), hexamethymelamine (HMM), and cis-platinum. Combination chemotherapy for cancer of the ovary has a 22%-91% response rate with 10%-

to 69% complete remissions.⁷ There are problems with most studies: some are single-arm with no controls; others report on previously treated patients; few include randomization for such factors as age, performance status, histology, and postoperative disease residual; complete remissions are not always surgically confirmed; and there is limited follow-up in some and little data on long-term survival on others.

Nevertheless, most authorities would agree that combination chemotherapy does have higher response rates than single agents. Combinations using platinum and cyclophosphamide (Cytosan) with or without Adriamycin are currently favored although excellent responses can be obtained with other drugs. Pathologically confirmed complete remissions can be expected in 20% of patients. In these, chemotherapy should be discontinued and the patients followed closely with examinations and tumor markers such as CA 125. Factors influencing response to chemotherapy include the histologic grade, the extent of residual disease and previous therapy.

Newer Developments

Intraperitoneal chemotherapy has been used in some patients because of the tendency of the cancer to remain confined to the intra-abdominal space. Through a Tenckhoff catheter, drugs such as methotrexate, 5-fluorouracil, Adriamycin and, in particular, cis-platinum have been successfully used in advanced disease.

At the St. Vincent Infirmary Cancer Center, 32 patients with ovarian cancer were seen from October 1984 to July 1986. Ages ranged from 32 to 81. All but two were epithelial

tumors. Twelve of the patients had stages I and II disease; none have died. Twenty had stages III and IV at diagnosis with six deaths at the time of this report. All patients were operated on and properly staged. Twenty-one received chemotherapy, sixteen of which were cis-platinum based protocols. Responses and survival are currently being evaluated.

Research in the field continues and *in vitro* cultures of human ovarian cell lines have been found helpful in studying patterns of drug resistance. An example of this is the report that buthionine sulfoximine may potentiate melphalan cytotoxicity. In addition new platinum forms are being developed as well as new agents.

In the meantime, the proper evaluation, staging and careful selection of patients with modern surgical approaches and well-controlled clinical trials with carefully selected drugs remain the best hope for the ultimate control of this previously incurable disease.

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FROM OTHER YEARS

Oscar Gray, Sr., M.D. 1874 - 1948

*Allan S. Pirnique, M.D.**

Dr. Oscar Gray, Sr., was born in Clarks, Columbia Parish, Louisiana, on the 19th of September, 1874. He attended Arcadia College in Arcadia, Louisiana, following which he qualified as a railroad telegrapher in Dallas, Texas and later in Little Rock. While in Little Rock, he served as a preceptor under a Little Rock physician and then entered into the two-year University of Arkansas Medical Department medical program. He received his medical degree in 1904.

Dr. Gray's ancestors included farmers and lawyers, with the first doctor being Dr. Richard Stark of Scotland, who settled in Virginia around 1684. One of Dr. Gray's great uncles was also a physician in Caldwell Parish, Louisiana.

After receiving his medical degree, Dr. Gray served a two-year internship at St. Vincent's Infirmary (he was the first intern there). For this time and for one more year, he was Demonstrator in Anatomy in the University of Arkansas Medical Department (1904-1907). Following this, he took special interest in gynecology, which he taught until 1920. His interest in gynecology apparently came, to a large extent, from Dr. Green of Little Rock, who was a family practitioner with emphasis in gynecological surgery. The types of surgery performed at that time were largely uterine fibroids, ovarian cysts, abscesses, etc. In addition to his association with the medical school, Dr. Gray was in the private practice of gynecology in Little Rock until his death on the 30th of June, 1948.

Dr. Gray was very active in the Pulaski County Medical Society and, for a number of years, was secretary of that organization. His private practice included many years of charity in the operating rooms of the old City Hospital.

In Dr. Gray's early career, he simultaneously owned a horse and buggy, a bicycle, and a very early Ford.

Dr. Gray married Rose Mathews. The Gray's had seven children, four boys and three girls. Two of his sons subse-

quently became physicians, graduating from the University of Arkansas Medical School. Dr. Oscar Gray, Jr., is a retired Navy admiral (Medical Corps), who is living in Pensacola, Florida. Dr. Paul Milton Gray, Sr., became a surgeon and



Oscar Gray, Sr., M.D.

practiced primarily in Corpus Christi, Texas, where he now resides. Two of Dr. Gray's daughters married physicians and two of his grandsons are physicians. One of his grandsons, Dr. Paul Milton Gray, Jr., is Associate Chief of Radiology at St. Luke's Hospital in Houston.

Dr. Gray's family home on Wolfe Street still stands as does the office where he was in private practice from 1924 until his death.

The author, Allan S. Pirnique, M.D., is Dr. Gray's grandson and is an internist in El Dorado, Arkansas.

THINGS TO COME

MARCH 13 - 18

Tenth Anniversary Winter Psychiatry Conference "Treatment Issues: New Challenges, New Directions." Sponsored by the Menninger Foundation. Yarrow Hotel and Conference Center, Park City, Utah. 28 hours of Category I credit. Fees: Physicians, \$345 prior to February 1; \$365 after February 1. Residents, \$220 prior to Feb. 1; \$240 after Feb. 1. Further information: Brenda Vink, Conference Coordinator, Box 829, Topeka, KS 66601; (913) 273-7500, ext., 5991.

FEBRUARY 5-8

Terminal Care: Consultations on Clinical and Policy Problems. Sponsored by Center for Biomedical Ethics and Case Western Reserve University School of Medicine. Mariner's Inn, Hilton Head, South Carolina. Twenty-three and a half Category I credit hours. Registration fee: \$175. Further information: Penny B. Weingarten, Program Coordinator, Concern for Dying, 250 West 57th Street, New York, New York; 1 (800) 248-2122.

KEEPING UP

Cholesterol: Current Concepts for Physicians

Self-Study Course for Physicians. Sponsored by the National Health, Lung and Blood Institute. A national cholesterol education program is available through the Arkansas Medical Society office in which a physician studies at home. Two hours Category I credit. Further information: David Wroten, Arkansas Medical Society, P. O. Box 5776, Little Rock, AR 72215; (501) 224-8967.

Arkansas Society of Medical Assistants Winter Seminar

February 6, 1988, 8:00 a.m. - 1:30 p.m. Presented by the Arkansas Society of Medical Assistants. Speakers: Roxie Troilett, R.N., Keith Dixon, M.D., Beth Morris, B.S., M.S., and Larry Weathers, M.D. White County Hospital, Searcy, Arkansas. Fee: \$35.00. Four CEU credit hours. Further information: Teresa Crisco, (501) 268-2441. Deadline: January 27, 1988.

Infectious Disease Update

February 15-16, 8:00 a.m. - 12 noon. Presented by Terry Yamauchi, M.D., Russell W. Steele, M.D.; Richard F. Jacobs, M.D.; Robert Glenn, M.D.; and A. Wesley Burks, M.D. Sponsored by Arkansas Children's Hospital and co-sponsored by UAMS Continuing Education for Physicians. The Sheraton Hot Springs Lakeshore Resort, Hot Springs. Eight Category I credit hours. Fee: \$80.00. For further information contact: Blanche Moore, Arkan-

sas Children's Hospital, 800 Marshall, Little Rock, AR 72202; (501) 370-1481.

How to Handle PID in the Office

February 17, 12:30 p.m. Presented by Dr. Wendell Ross. Sponsored by AHEC - Fort Smith. Sparks Regional Medical Center, Medical Library. 1 Category I credit hour.

Malignant Esophageal Disease

February 18, 12:30 p.m. Presented by Dr. Leon P. Woods. Sponsored by AHEC - Fort Smith. Sparks Regional Medical Center, Medical Library. 1 Category I credit hour.

Beta Blockers vs. Calcium Channel Blockers

February 23, 12:30 p.m. Presented by Charles Marsh, Pharm D. Sponsored by AHEC - Fort Smith. Sparks Regional Medical Center, Medical Library. 1 Category I credit hour.

Pulmonary Embolism

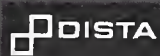
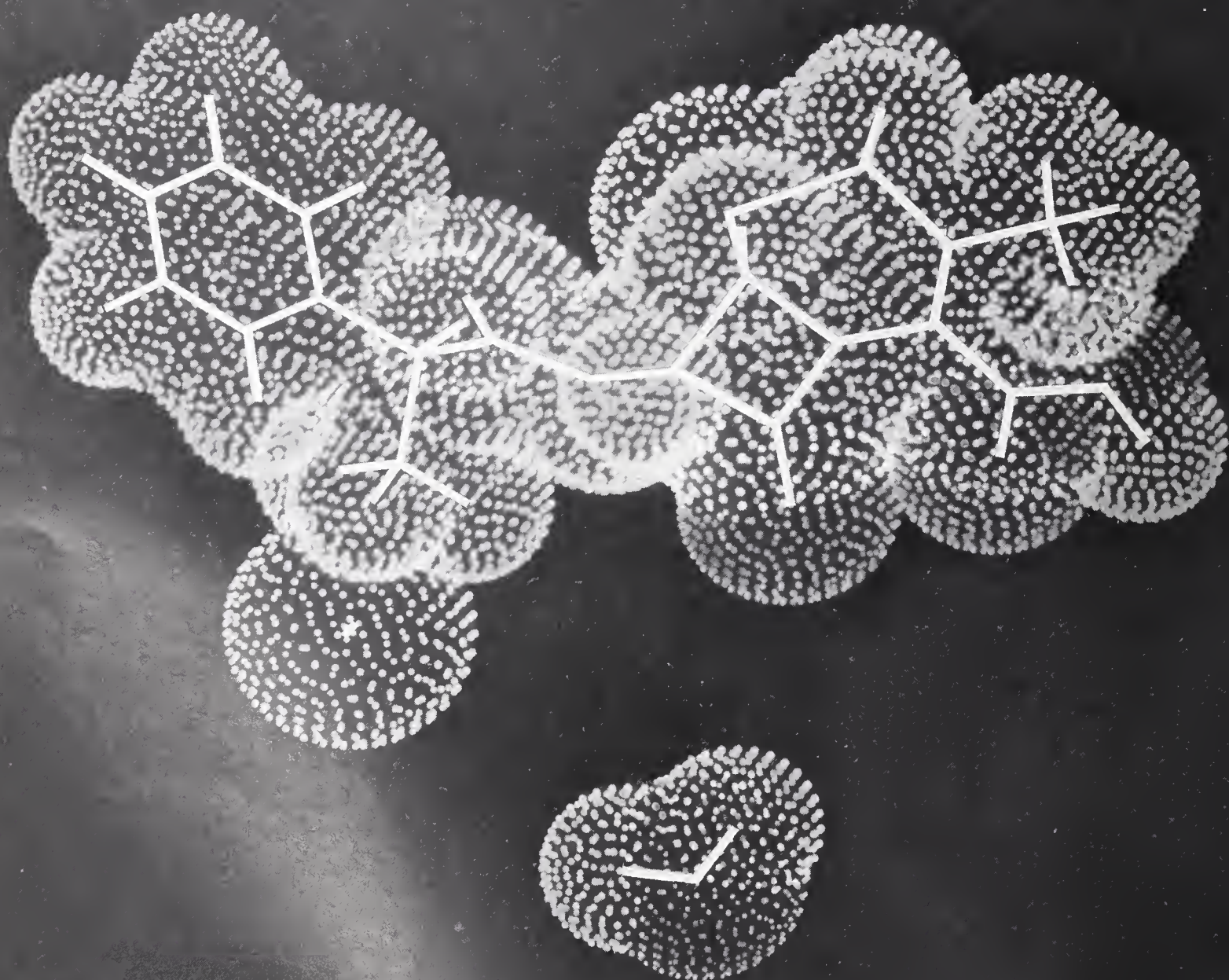
February 27-28, time to be announced. Presented by Glenn V. Dalrymple, M.D., and Ernest J. Ferris, M.D. Sponsored by the University of Arkansas for Medical Sciences Office of Continuing Education for Physicians. UAMS Education Building, Room G141A/B. Fees to be announced.

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trointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined
in pregnancy and lactation. Cephalexin is excreted
in mother's milk. Exercise caution in prescribing
Keftab for these patients.
- Safety and effectiveness in children have not been
established.

Adverse Reactions:

- *Gastrointestinal*, including diarrhea and, rarely, nau-
sea and vomiting. Transient hepatitis and chole-
static jaundice have been reported rarely.
- *Hypersensitivity* in the form of rash, urticaria, angio-
edema, and, rarely, erythema multiforme, Stevens-
Johnson syndrome, or toxic epidermal necrolysis.
- *Anaphylaxis* has been reported.
- *Other reactions* have included genital/anal pruri-
tus, genital moniliasis, vaginitis/vaginal discharge,
dizziness, fatigue, headache, eosinophilia, neutro-
penia, and thrombocytopenia; reversible interstitial
nephritis has been reported rarely.
- Cephalosporins have been implicated in trigger-
ing seizures, particularly in patients with renal
impairment.
- *Abnormalities in laboratory test results* included
slight elevations in aspartate aminotransferase
(AST, SGOT) and alanine aminotransferase (ALT,
SGPT). False-positive reactions for glucose in the
urine may occur with Benedict's or Fehling's solu-
tion and Clinitest® tablets but not with Tes-Tape®
(Glucose Enzymatic Test Strip, USP, Lilly).

Malignant Melanoma - An Epidemic?

March 5, 8:30 a.m. - 12:00 noon. Presented by G. Thomas Jansen, M.D. Sponsored by St. Vincent Medical Center. St. Vincent Medical Center, Little Rock. 3 Category I credit hours.

Guidelines to Treating Patients over the Phone

March 16, 12:30 p.m. Presented by Wendell Ross, M.D. Sponsored by AHEC - Fort Smith. Sparks Regional Medical Center, Medical Library, Fort Smith. 1 Category I credit hour.

Aortiliac Occlusive Disease

March 17, 12:30 p.m. Presented by Donald Patrick, M.D. Sponsored by AHEC - Fort Smith. Sparks Regional Medical Center, Medical Library, Fort Smith. 1 Category I credit hour.

Weight Loss Diets

March 22, 12:30 p.m. Presented by Ginger Ogle, R.D. Sponsored by AHEC - Fort Smith. Sparks Regional Medical Center, 7th Floor Dining Room. 1 Category I credit hour.

Diabetic Diets

March 30, 12:30 p.m. Presented by Ginger Ogle, R.D. Sponsored by AHEC - Fort Smith. Sparks Regional Medical Center, 7th Floor Dining Room, Fort Smith. 1 Category I credit hour.

Twenty-third Annual Surgical Symposium

March 31 - April 2, time to be announced. Presented by Robert W. Barns, M.D. Sponsored by the University of Arkansas College of Medicine. Arlington Hotel, Hot Springs, AR. Fees for meals/registration to be announced. Approximately seven Category I credit hours.

Recurring Education Programs

EL DORADO - AHEC

Behavioral Sciences Conference, first and fourth Friday, 12:15 p.m., AHEC - South Arkansas.
Chest Conference, third Wednesday, 12:30 p.m., Warner Brown Hospital
Fracture Conference, third Tuesday, 12:15 p.m., AHEC-South Arkansas
Gynecology-Pathology Conference, second Friday, 12:15 p.m., AHEC-South Arkansas
Internal Medicine Conference, first, second and fourth Wednesday, 12:15 p.m., AHEC-South Arkansas
Pathology Conference, second Tuesday, 12:15 p.m., AHEC-South Arkansas
Pharmacology Conference, second Thursday, 12:15 p.m., AHEC-South Arkansas
Obstetrics-Gynecology Conference, fourth Thursday, 12:15 p.m., AHEC-South Arkansas
Surgical Conference, first, second and third Monday, 12:15 p.m., AHEC-South Arkansas
Tumor Clinic, fourth Tuesday, 12:15 p.m., AHEC-South Arkansas

FAYETTEVILLE - AHEC NORTHWEST

City Hospital Staff Meeting, second Friday, 12:00 noon, Fayetteville City Hospital
Medicine Teaching Conference, first, third and fifth Thursday, 1:00 p.m., AHEC - NW, 241 W. Spring, Fayetteville
Nephrology Lecture Series, fourth Thursday, 12:30 p.m., AHEC- NW, 241 W. Spring, Fayetteville
Rheumatology Lecture Series, first Tuesday, 12:30 p.m., VA Medical Center.

FAYETTEVILLE - VA MEDICAL CENTER

Medical Conference (varying topics), each Wednesday, 12:15 p.m., Conference Room, Building 1
Pathology/Mortality Conference, each Friday, 12:30 p.m., Conference Room, Building 1

FORT SMITH-AHEC

Cardiology Conference, first Wednesday, 12:30 noon, Sparks Regional Medical Center, 4th Floor Conference Room
Neurology Conference, second Thursday, 12:30 noon, Sparks Regional Medical Center, Medical Library

HOT SPRINGS-AMI NATIONAL PARK MEDICAL CENTER

Continuing Medical Education Lunchcon for Medical/Dental Staff, varying topics, second and fourth Friday, 12:30 p.m., Classrooms, AMI National Park Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, first and third Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Annex Building
Arkansas Methodist Hospital CME Conference, last Friday, 7:00 a.m., Arkansas Methodist Hospital, Paragould
Cherokee Village Tumor Conference, third Monday, 6:00 p.m., Ozark Baptist Memorial Hospital, Cherokee Village, every four months.
Chest Conference, fourth Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room
Independence County Medical Society, second Tuesday, 7:30 p.m., White River Medical Center, Batesville

Interesting Case Conference, second and fifth Tuesday, when applicable, 12:00 noon, St. Bernard's Dietary Conference Room
Kennett Tumor Conference, second Tuesday (every other month), 12:00 noon, Twin Rivers Regional Medical Center, Kennett, Mo.
Methodist Hospital of Jonesboro CME Staff Conference, second Tuesday, 7:30 p.m., Cafeteria, Methodist Hospital of Jonesboro
Monthly Medical Lecture Series, third Tuesday, 7:30 p.m., rotates each month between Walnut Ridge and Pocahontas
Neuroradiology Conference, second Friday, 12:00 noon, St. Bernard's Dietary Conference Room.
Newport Tumor Conference, second Wednesday, 12:00 noon, rotates each month between Harris Clinic and Newport Hospital
Perinatal Conference, second Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Piggott Tumor Conference, third Wednesday, 12:00 noon, Piggott Hospital, every four months.
Poplar Bluff Tumor Conference, third Wednesday, 12:00 noon, Lucy Lee Hospital, Poplar Bluff.
Tumor Conference, fourth Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Wynne Tumor Conference, third Monday, 6:00 p.m., Grecian Steak House, Wynne, every four months.

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Alternating Sub-Specialty Conference, third Wednesday, 12:00 noon, Second Floor Classroom
General Pediatrics Seminar, first and third Friday, 12:00 noon, Second Floor Classroom
Genetics Conference, each Wednesday, 12:00 noon, Sturgis Building, Room 457
Infectious Disease Conference, second Wednesday, 12:00 noon, Sturgis Building, Room 121
Metabolic Neurology Conference, first Wednesday, 1:00 p.m., Polly R. Thomas Conference Room
Pediatric Grand Rounds, each Tuesday, 8:00 a.m., Sturgis Building, Auditorium
Pediatric Neuropsychiatry Conference, second Wednesday, 1:30 p.m., Polly R. Thomas Conference Room
Pediatric Neuroscience Conference, first Thursday, 8:00 a.m., Second Floor Classroom
Pediatric Pathology Conference, first Wednesday, 12:00 noon, Second Floor Classroom
Pediatric Pharmacology Conference, fifth Wednesday when applicable, 12:00 noon, Second Floor Classroom
Pediatric Radiology Conference, first and third Thursday, 12:00 noon, Second Floor Classroom
Pediatric Research Conference, third Monday, 12:00 noon, Second Floor Classroom
Problem Case Conference, second and fourth Friday, 12:00 noon, Second Floor Classroom

LITTLE ROCK-ST. VINCENT INFIRMARY

Cancer Conference, first Wednesday, 12:00 noon, CARTI Auditorium. A meal is provided.
Cancer Conference, third and fourth Thursday, 12:00 noon, Room S1174K, Lab. A meal is provided.
General Medicine Journal Club, each Tuesday, 12:00 noon, Medical Affairs Conference Room. Bring your lunch.
Hematology-Oncology Conference, second Thursday, 12:00 noon, Laboratory Library. A meal is provided.
Interhospital Urology Grand Rounds, first Tuesday, 5:30 p.m., Maumelle Room. Refreshments are provided.
Neuropathology Conference, third Tuesday, 5:00 p.m., Room S1174K, Laboratory. Refreshments are provided.
Pediatric Conference, first Tuesday, 12:30 p.m., Maumelle Room. A meal is provided.
Peripheral Vascular Disease Conference, third Tuesday, 6:00 p.m., Maumelle Room. A meal is provided.
Pulmonary Conference, second and fourth Wednesday, 12:00 noon, DeSoto Room. A meal is provided.

LITTLE ROCK-UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

ACRC/CARTI Tumor Conference, each Wednesday, 12:00 noon, CARTI, Markham & University
ACRC Oncology Forum, fourth Thursday, 4:00 p.m., UAMS Education Building, Room G137
Anesthesia Conference Series, each Wednesday, 4:00 p.m., UAMS Education Building, Room G/110 A&B
Anesthesia Lecture Series, each Wednesday and Thursday, 4:00 p.m., UAMS Education Building, Room G/110 A&B
Anesthesia Morbidity and Mortality Conference, each Tuesday, 6:45 a.m. (Wednesday afternoon only during last week of the month at 4:00 p.m.), UAMS Education Building, Room G/110 A&B
Interdisciplinary Gynecologic Cancer Conference, each Friday, 12:30 p.m., UAMS Education Building, Room G106 A&B
Medicine Grand Rounds, each Thursday, 12:15 p.m., UAMS Shorey Auditorium.
Medicine Research Conference, each Tuesday, 8:00 a.m., UAMS Shorey Building Room 8/105
Neurology Clinical Case Conference, three Thursdays per month, 8:00 a.m. Rotates between UAMS (7D33) and LRVAMC (3S) and ACH.
Neuropathology Conference, every Tuesday, 4:00 p.m. Rotates between UAMS (Shorey Building, 4th floor) and LRVAMC (Autopsy Room).
Neuroscience Conference (Basic), second, third, and fourth Monday, 8:00 a.m., UAMS 7D33.
Ob/Gyn Grand Rounds, each Wednesday, 7:30 a.m., UAMS Education Building, Room G/131B
Ophthalmology Problem Case Conference, each Thursday, 4:00 p.m., UAMS AAC Eye Clinic, Room 3/150.
Orthopaedic Bibliography Conference, each Tuesday, 8:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Fracture Conference, each Tuesday, 7:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Grand Rounds, each Tuesday, 10:00 a.m., UAMS Education Building, Room B/135
Psychiatry Grand Rounds, each Friday, 11:00 a.m., UAMS Shorey Auditorium
St. Vincent Urology Grand Rounds, first Tuesday, 5:30 p.m., St. Vincent Infirmary, Education Building, Room 159
Surgery Grand Rounds, each Monday, 5:00 p.m., UAMS Education Building, Room G/141A
Surgery Morbidity and Mortality Conference, each Wednesday, 5:00 p.m., UAMS Education Building, Room G/131A.
Surgery Review Conference, each Monday, 6:00 p.m., UAMS Education Building, Room G/141A
Urologic Topics (Resident Presentation), once or twice monthly, 5:00 p.m., UAMS
Urology Grand Rounds, twice monthly, 5:00 p.m., VAMC
Urology Morbidity and Mortality Workshop, last Wednesday, UAMS
Uro-Radiology Workshop (Urologic Imaging), first Thursday, 5:00 p.m., UAMS
VA Medical Service Teaching Conference, each Thursday, 8:00 a.m., VAMC, Room 2D109
VA Physical Medicine and Rehab Grand Rounds, fourth Friday, 11:00 a.m., NLRVA Building 89, Conference Room, or Arkansas Rehab Institute
VA Surgery Grand Rounds, each Thursday, 12:45 p.m., VAMC, Room 2D109
VA Topics in Rehabilitation Medicine, each Thursday, 7:45 a.m., NLRVA Conference Room, Building 89L
VA Weekly Cancer Conference (Surgical Service), each Tuesday, 1:00 p.m., VAMC, Room 2D109

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, third Thursday, 7:00 a.m., Conference Room 1

Grand Rounds Conference, each Wednesday, 12:00 noon, Conference Room 1. Lectures and Case Presentations. A light lunch will be served

Pathology Conference, third Tuesday, 3:00 p.m., Pathology Library. Case Presentations.

Pulmonary Conference, each Tuesday, 12:00 noon, Shuffield Auditorium. Lunch served for \$2.50.

Surgery Conference, each Thursday, 7:30 a.m., Shuffield Auditorium. Lectures and Case Presentations.

PINE BLUFF-AHEC

Behavioral Science Conference, each Thursday, 12:30 p.m., Jefferson Regional Medical Center

Chest Conference, second and fourth Friday, 12:30 p.m., Jefferson Regional Medical Center

Family Practice Conference, fourth Tuesday, 12:30 p.m., Jefferson Regional Medical Center

Internal Medicine Conference, second and fourth Wednesday, 12:30 p.m., Jefferson Regional Medical Center

Obstetrics/Gynecology Conference, second Tuesday, 12:30 p.m., Jefferson Regional Medical Center

Pediatric Conference, third Wednesday, 12:30 p.m., Jefferson Regional Medical Center

Radiology Conference, third Tuesday, 12:30 p.m., Jefferson Regional Medical Center

Southeast Arkansas Medical Lecture Series, third Tuesday, 6:30 p.m., Rosswood County Club. Dinner meeting.

Sub-Specialty Conference, first Tuesday, 12:30 p.m., Jefferson Regional Medical Center

Surgery Conference, first Wednesday, 12:30 p.m., Jefferson Regional Medical Center

TEXARKANA-AHEC

Chest Conference, third Wednesday, 12:30 p.m., St. Michael Hospital

Tumor Conference, first Wednesday, 7:00 a.m., St. Michael Hospital

As organizations accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the organizations named certify that these continuing medical education activities meet the criteria for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

MEDICINE IN THE NEWS

Arkansas Medical Society Establishes Department of Governmental Affairs

Recognizing the ever-growing importance of legislative activity in the field of medicine, the Arkansas Medical Society has established a Department of Governmental Affairs and has named Mr. Lynn Zeno, a registered lobbyist, as its director. Zeno began work December 7.

Zeno brings 13 years of experience with him to the job. He attended Henderson State University and graduated with a Masters of Science in Education degree in 1973. He served as the Assistant Director of the Association of Arkansas Counties, representing 1,200 elected county officials, until being selected Executive Vice President of the Independent Insurance Agents of Arkansas in 1979. For the past eight years, he has very effectively represented the property and casualty insurance industry.

Zeno has served on the Juvenile Advisory Group of the Arkansas Department of Human Services and was appointed by Governor Clinton to the first Certification Board of the Arkansas Assessment Coordination Division. He is a member of the Arkansas Workers' Compensation Study Commission and was appointed by Insurance Commissioners Linda Garner and Robert Eubanks as the Chairman of

the Arkansas Insurance Examining Advisory Board. He is current Chairman of the Arkansas Highway Users Federation, a non-profit business league involved with the quality of highway transportation and traffic safety.



Lynn Zeno, Director
Legislative Affairs Department

Zeno is a member of the Arkansas State Chamber of Commerce and serves on the Governmental Affairs Council of the Greater Little Rock Chamber of Commerce. He is a past president of the Arkansas Society of Association Executives, which represents more than 75 of the major trade associations in Arkansas.

He has served as a guest lecturer at the University of Arkansas at Little Rock and the University of Central Arkansas and has had several articles published, most recently on the subject of tort reform. Mr. Zeno, a native of Winchester in Southeast Arkansas, is married. His wife, Sara, is a speech pathologist in Little Rock.

For many years, the Society staff and a dedicated group of doctors serving on the Legislative Committee were able to meet the Society's needs in regard to legislation affecting the medical profession. However, the legislature has transformed from an entity which met every two years for 60 days into a group which meets virtually year-round through a continuous series of interim committee meetings. In addition, the threat of interlopers wanting to justify inferior health care through well-orchestrated legislative activity continues to increase. Under the direction of the Legislative Committee, Zeno's experience and reputation is expected to result in positive legislative results for the medical profession in Arkansas.

AMS, Arkla Cooperate in "Medical Alert" Program for Elderly

In an effort to prevent the cutoff of natural gas service to the people who are ill this winter, the Arkansas Medical Society and Arkansas Louisiana Gas Company, one of the state's suppliers of natural gas, have combined efforts in the "Medical Alert" program. The program enables Arkla customers to contact their local gas department, and with the proper clearance, prevent their gas service from being cutoff if it would endanger the lives of the elderly persons living there to do so.

The program requires that the individuals call their local Arkla office, after which the company will send a Physicians Certificate of Medical Emergency for the family's physician to complete.

The return of the certificate ensures that the service will be continued even if individuals fall behind on payment of their bill during the winter. The customer will still be responsible for payment of the bill; however, payment can be delayed until the warm weather returns.

AMS Receives AIDS Education Support from Burroughs-Wellcome

Burroughs-Wellcome Company has granted \$1,000 to support the Arkansas Medical Society's statewide AIDS education program for physicians and other health care

providers. The check was presented to the Society by Burroughs-Wellcome representative, Dale Emmerling.

Mr. Emmerling and his district manager, Roger Cooper, recommended the grant money approval after noting the AMS AIDS Committee's efforts in teaching Arkansas physicians about AIDS, and the physicians interest in stopping the spread of the disease.

Burroughs-Wellcome has also given the Society several copies of "The Ray of Hope," a video tape on Retrovir (formerly known as azidothymidine or AZT) in which clinical investigators share their experiences. The VCR tape is available through the Society office.

Practice and Financial Management Encyclopedia Available

The Medical Economics Encyclopedia of Practice and Financial Management has been updated and revised to reflect the recent overhaul of U. S. tax laws as well as the latest trends in the medical marketplace. Drawing on the experience of leading practice management consultants, attorneys, financial planners, accountants, and other experts familiar with physicians' concerns, the book offers advice on important decisions physicians must make through their careers.

Medical Economics Encyclopedia of Practice and Financial Management is available for \$79.00 from Medical Economics Books, Box C-779, Pratt Station, Brooklyn, New York 11205. For further information or to request a review copy, write to Phyllis D. Gold, Director of Marketing, Medical Economics Books, Oradell, NJ 07649.

Brochure on Elderly On Hand in AMS Office

Copies of an expanded version of AMA's brochure, "Protecting the Elderly," can now be obtained by contacting the AMS office.

The brochure describes the elements of AMA's plan, based on reports recently adopted by the AMA's House of Delegates. Under this plan, health insurance protection for the elderly would be pre-funded on a fiscally sound basis and there would be equitable cost-sharing by those individuals who can afford to pay a greater share of their health expenses.

The updated edition contains a section giving answers to 15 commonly raised questions about AMA's approach for reforming the Medicare program.

Physicians Awarded for Impairment Research

What proportion of physicians suffer mental illness or become abusers of drugs or alcohol during their careers? What type of medical student is likely to be a heavy drinker?

These are the questions answered by two researchers who captured first-ever awards presented by the AMA for

research in the field of impairment.

T. A. Pearson, M.D., of Johns Hopkins University and Mary Ann Forney, Ph.D., from the Medical College of Georgia, received awards at the AMA's Eighth National Conference on the Impaired Health Professional.

Dr. Pearson's research won him the Sidney Cohen Award for Outstanding Contribution to the Understanding of Addictions. Dr. Pearson's work was entitled "A Long-Term Prospective Study of Physician Impairment." Pearson's study began in 1946, with 1,137 Johns Hopkins medical students, and collected extensive long-term data on alcohol and drug abuse and mental illness among physicians. The study followed the students' careers through annual updates. The results showed a cumulative incidence for suicide of 1.7% by age 54, with most suicides occurring within 20 years of graduation from medical school. In addition, 4.5% developed major mental illness, 27.9%

admitted to alcohol abuse and 2% admitted to consuming at least four alcoholic beverages per day.

Dr. Mary Ann Forney, the researcher from the Medical College of Georgia, received the AMA Award for New Research into Impairment Issues. Dr. Forney won the award for her study "Psychological and Sociodemographic Correlates of Heavy Drinking Among First-Year Medical Students." Dr. Forney's researchers identified characteristics of medical students in seven medical schools who classified themselves as heavy drinkers.

Of 937 students surveyed, 612 responded. The findings were that the medical student who is a heavy drinker is "most likely to be male, white, Catholic, an irregular church-goer, either an ex-drug user or presently using drugs, an infrequent user of seatbelts, prone to drink and drive, in a drunken state at least once a week, in excellent physical health, or dissatisfied to some extent with life.

NEWSMAKERS

Ken LaMastus, executive vice president of the Arkansas Medical Society, has been recertified as an association executive by the American Society of Association Executives. His recertification was effective January 1, 1988 and extends until January 1, 1991.

Mr. LaMastus has also been appointed as chairman of the Maumelle, Arkansas, Civil Service Commission. His duties during his two-year term as chairman will include developing the regulations established for examination, termination and appeal processes for all uniformed personnel in Maumelle. This includes public safety, ambulance and emergency service personnel.

The Eighth Councilor District of the Arkansas Medical Society has a new councilor. **Dr. David Barclay**, an obstetrician/gynecologist in Little Rock, will finish the term left vacant by the death of Dr. Frank Morgan. Other councilor news: **Dr. Pat Phillips** of Fort Smith has resigned his position as councilor in the Tenth Councilor District. That position remains vacant.

Dr. Joseph L. Rosenzweig, a retired Hot Springs physician, has been appointed to the Arkansas Advisory Committee to the U.S. Commission on Civil Rights. In addition to his duties on the commission, Rosenzweig has served as a board member for 18 years on the developmental disabilities components of the Arkansas Department of Mental Retardation.

Governor Bill Clinton has recently appointed **Dr. Thomas Thompson** to the Certified Nurse Midwife Committee. Dr. Thompson is a Hot Springs obstetrician and gynecologist.

The American Board of Internal Medicine recently recognized **Dr. David M. Johnson** of Searcy for his advanced achievement in internal medicine. Dr. Johnson Completed three modules of the AAIM examination and is the first physician in Searcy to do so.

Dr. James M. Sheppard, an El Dorado family physician, has been elected to the board of directors of Exchange Bank and Trust Company. Dr. Sheppard is also on the board of directors of the El Dorado Chamber of Commerce.

A support group has been formed for Parkinson's patients at St. Bernards Annex, Jonesboro. **Dr. Gary Goza**, a neurologist from Jonesboro, is included with the trained personnel involved with the Northeast Arkansas Parkinson's Support Group.

The South Arkansas Professional Education Committee presented its sixth annual Cancer Symposium recently in El Dorado. Speakers included **Dr. Srinivasan, Dr. Moises A. Mendendez and Dr. Joseph Beck**. **Dr. W. R. Scurlock** served as moderator for the symposium.



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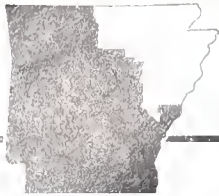
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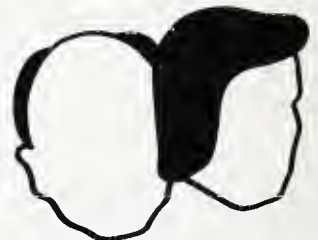
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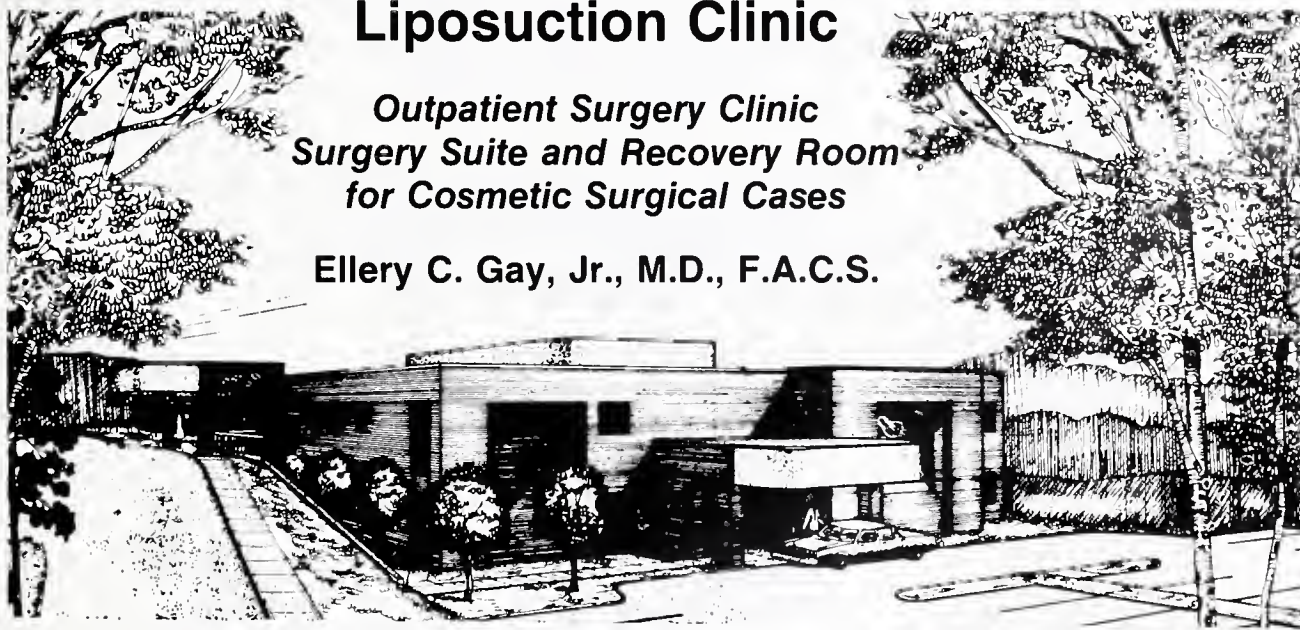
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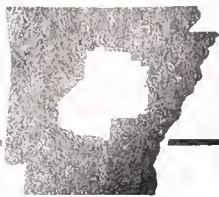
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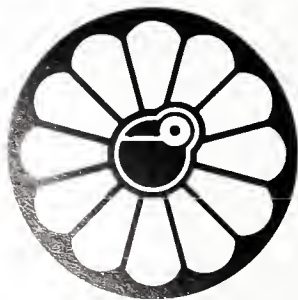
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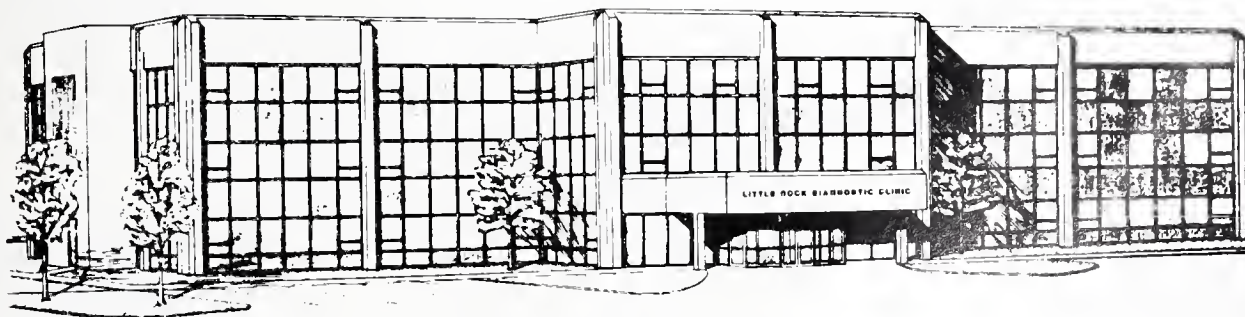
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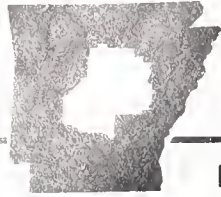
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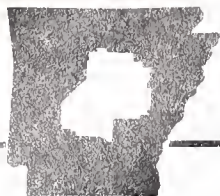
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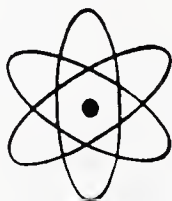
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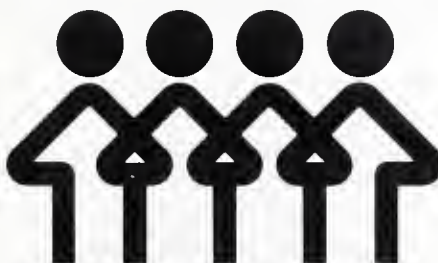
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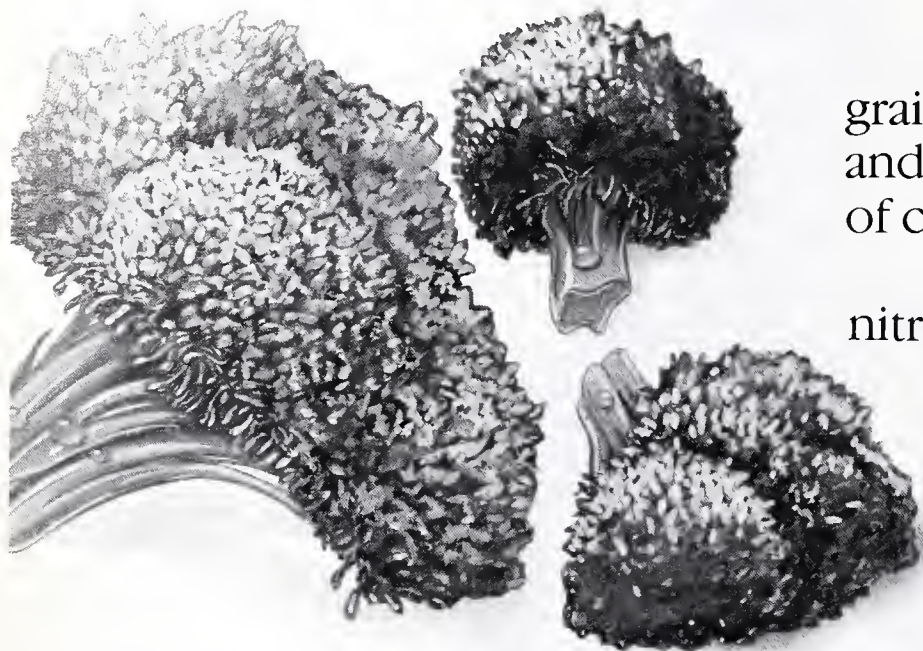


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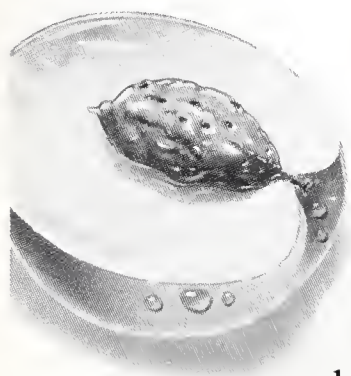
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On Our Cover: Turtles are just one of the "non-game" animals protected by Arkansas law. Photo by Jim Low, Arkansas Game and Fish Commission.

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AIDS in Arkansas

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Update: February 1988

A Systematic Approach to the Management of the HIV Positive Individual

Linda Markland, M.D.*

As cases of HIV infection continue to rise, primary care physicians are now thrust into a crucial role. They must be familiar with signs and symptoms, viral transmission, and basic management of a syndrome whose full range is probably not totally understood. Although the *Index Medicus* listed 2,159 major articles on AIDS in 1987, there is a paucity of references in the medical literature concerning the management of patients with early HIV infections.¹⁻⁶ In the six years following the first reports of AIDS,⁷⁻⁹ disease descriptions in the literature have increasingly revealed more information about the progression of the syndrome from seroconversion to death.^{10,11}

The following process may be helpful in determining where a patient falls in the disease progression and in organizing patient management strategies. Four steps are involved in this process: (1) interpretation of HIV antibody testing; (2) initial medical evaluation; (3) classification of the HIV infections; and (4) ongoing medical management.

Step 1: Interpretation of HIV Antibody Testing

The first problem is determining whether or not the person is HIV positive. Currently two HIV antibody tests are used in the United States. The ELISA is a screening test which can be done easily in most hospital laboratories. The Western Blot is the confirmatory test. It is time and labor intensive and done only in reference laboratories. All patients who receive HIV antibody testing should be counseled before and after the test is performed, in order that

they understand the limitations and implications of the test results.¹²

There is a high false positive rate with the ELISA HIV antibody screening test;¹²⁻¹⁹ therefore, a person should never be declared positive unless the confirmatory Western Blot test is positive. False positives can also occur with the Western Blot test. If there is only a core antibody (p24 or p55) present, this could be a false positive, or it could represent early infection.^{13,14} To be definitely positive, a Western Blot test should reveal antibody bands to the viral envelope antigen (i.e., gp41, p64, gp120.) Reference laboratories should always report which bands are positive on the Western Blot test.²⁰

If a patient in good health is a member of a high risk group and is ELISA negative, it is advisable to repeat the ELISA test every 3-6 months for up to 15 months after suspected exposure. A recent report has documented cases of seroconversion occurring up to 14 months after exposure.¹⁵ Generally, seroconversion occurs within 12 weeks after exposure.

The new HIV antigen p24 tests should help identify patients in the early stages of seroconversion, prior to antibody development.¹⁶ This will be especially helpful in identifying infants who are truly infected, as the HIV antibody test may be positive in infants born to positive mothers due to passively acquired maternal antibody up to 15 months of age. The antigen test will not replace the antibody test however, because soon after seroconversion it becomes negative again until the patient's cell mediated immunity status declines further. It then becomes positive once again.¹⁷ The antigen test should become commercially available this year. At the present time, if a member of a high risk group has signs and symptoms of HIV infection, medi-

*Associate Professor, Department of Family and Community Medicine, Area Health Education Center, 241 West Spring, Fayetteville, Arkansas 72701.

cal evaluation should be pursued regardless of a negative antibody status.

All patients in a high risk group should receive counseling concerning HIV transmission regardless of their antibody status. It is safer to assume that they might be infectious in order to prevent further transmission of the virus.

Step 2: Initial Evaluation

All HIV positive individuals should have a history and physical as well as laboratory studies to identify the extent of the primary HIV infection and to discover opportunistic infections or cancers. Suggested baseline laboratory studies include complete blood count, T-cell lymphocyte profile, erythrocyte sedimentation rate, cytomegalovirus titer, chemistry panel, stool for ova and parasites, venereal disease research lab, chest film and hepatitis panel. Because of the incidence of neurological involvement in 50-70% or more of AIDS patients,¹⁸ a neurological workup consisting of a CT of the head, lumbar puncture for cerebrospinal fluid analysis, and a Weschsler IQ test should probably be done during the initial evaluation to establish a baseline.

The results of the basic evaluation should direct the need for more extensive evaluation such as cryptococcal or toxoplasmosis serology, pulmonary function tests, ABG's, gallium scans, bone marrow aspirate with cultures, blood cultures for bacteria, fungi, cytomegalovirus or *Mycobacterium avium-intracellulare*. More invasive procedures such as endoscopy, bronchoscopy, lung biopsy and skin biopsy are not as widely performed as they once were early in the AIDS epidemic as physicians have become familiar with the clinical presentation of esophageal candidiasis, *Pneumocystis carinii* pneumonia, and Kaposi's sarcoma. The Centers for Disease Control (CDC) began accepting presumptive, rather than definitive, diagnostic evaluation for these conditions as of September 1, 1987. Skin tests were used to diagnose and monitor the degree of T-cell dysfunction early in the AIDS epidemic prior to the discovery of HIV and the subsequent development of HIV antibody tests. Skin tests are no longer considered an essential part of the workup, and monitoring the progress of the disease is best done by following the T₄ lymphocyte count.²⁰

Step 3: Classification of HIV Infection and Reporting AIDS Cases

Following the initial evaluation, it is necessary to determine into what category of disease the patient falls for purposes of management and surveillance. The CDC has recently (September 1, 1987) revised the case definition of AIDS.¹⁹ The reasons for the revision were (1) to track more effectively the severe morbidity associated with HIV-1 and HIV-2 infections; (2) to simplify the reporting of AIDS cases; (3) to increase the sensitivity and specificity of the definition through greater diagnostic application of laboratory evidence for HIV infection; and (4) to be consistent with current diagnostic practice, which in some cases in-

cludes presumptive (i.e., without confirmatory laboratory evidence) diagnosis of AIDS-indicative disease (e.g., *Pneumocystis carinii* pneumonia, Kaposi's sarcoma).

The major changes apply to patients who have laboratory evidence for HIV infection (i.e., positive Western Blot antibody test or antigen test.) These changes are: (1) inclusion of HIV encephalopathy, HIV wasting syndrome, and a broader range of AIDS-indicator diseases; (2) inclusion of AIDS patients whose indicator diseases are diagnosed presumptively; and (3) elimination of exclusions due to other causes of immunodeficiency. A detailed description of how to apply the new criteria was published in the January 1988 issue of *The Journal of the Arkansas Medical Society*.

Applying the new criteria for the diagnosis of AIDS is simplified if one uses the CDC classification for HIV infections.²¹ The CDC classification is a hierarchical system which includes four groups (Table I) and is based on chronology. A patient should not be reclassified into a preceding group if clinical findings resolve; clinical improvement may not accurately reflect changes in the severity of the underlying disease.

The diagnosis of reportable AIDS is reserved for those who fall into Group IV. However, not all patients classified in Group IV will meet the new criteria for AIDS, specifically not all in Subgroup A or Subgroup D, Category 2. Also, since the case definition was revised in September, 1987, several AIDS-indicative opportunistic infections have been added which were not included in the classification system which was developed in 1986.

Although the CDC classification system and the revised case definition for AIDS do not fit together perfectly, the system nevertheless provides the most logical approach available for defining HIV disease progression.

The majority of patients falling into Group IV can be reported as AIDS. Patients with negative antibody results require more definitive (i.e., tissue) diagnoses for opportunistic disease and more evidence of T-cell lymphocyte dysfunction (<400) than patients whose antibody test is positive.

The actual reporting of AIDS is done by filling in data on a case report form obtained from the State Health Department (Acquired Immunodeficiency Syndrome (AIDS) Adult Confidential Case Report, CDC 50-42A). In the state of Arkansas, only those cases which fulfill all the criteria for AIDS case definition are to be reported.

Step 4: Ongoing Medical Management

At this time there are no well-established guidelines regarding the management of early HIV infection. There is only one antiviral agent commercially available which is licensed for use in HIV infection (zidovudine, formerly AZT). It was first used in patients falling into Group IV, Subgroup C, with *Pneumocystis carinii* pneumonia. The patients taking the drug had a more favorable outcome than controls.²² It was therefore released early in the clinical

TABLE I. Classification System for Human T-Lymphotropic Virus Type III/Lymphadenopathy-Associated Virus Infection

GROUP I ACUTE INFECTION

Acute infection is a mononucleosis-like syndrome with or without aseptic meningitis associated with seroconversion for HIV antibody.

GROUP II ASYMPTOMATIC HIV INFECTION

Patients in this group must have no sign or symptom that would have led to classification in Group III or IV. Patients in this group may have normal or abnormal CBC's and T-lymphocyte counts.

GROUP III PERSISTENT GENERALIZED LYMPHADENOPATHY

These patients must have lymph node enlargement of 1 cm or greater at extrainguinal sites for more than three months in the absence of a concurrent illness or condition other than HIV to explain the findings.

GROUP IV OTHER HIV DISEASE

Subgroup A: Constitutional Disease

Patients must have one or more of the following:

1. Weight loss greater than 10% of baseline
2. Fever persisting for more than one month
3. Diarrhea persisting for more than one month AND the absence of concurrent illness or condition other than HIV to explain the findings. The diagnosis of AIDS can be applied ONLY if the patient has satisfied #1 PLUS either #2 or #3.

Subgroup B: Neurological Disease

Patients must have one or more of the following:

1. Dementia
2. Myelopathy
3. Peripheral Neuropathy AND the absence of the concurrent illness or condition other than HIV infection to explain the findings. The diagnosis of AIDS can be applied if any of these findings are present.

Subgroup C: Secondary Infectious Diseases

Patients must have an infectious disease associated with HIV infection or at least moderately indicative of a defect in cell mediated immunity. The following infectious diseases are divided into two categories:

Category C₁

1. *Pneumocystis carinii* pneumonia
2. chronic cryptosporidiosis
3. toxoplasmosis
4. extraintestinal strongyloidiasis
5. isporiasis
6. candidiasis (esophageal, bronchial, or pulmonary)
7. cryptococcosis
8. histoplasmosis
9. *Mycobacterium avium-intracellulare* infection
10. cytomegalovirus infection
11. chronic mucocutaneous or disseminated herpes simplex infection
12. progressive multifocal leukoencephalopathy.

The diagnosis of AIDS can be applied if any of these infections from Category C₁ are present. *Coccidiomycosis*, *recurrent major bacterial infections in a child <13 years old*, *recurrent salmonella bacteremia*, and *disseminated mycobacterial tuberculosis* have been added as AIDS indicator diseases.

Category C₂

1. oral hairy leukoplakia
2. multidermatomal herpes zoster
3. recurrent salmonella bacteremia
4. nocardiosis
5. tuberculosis
6. oral candidiasis

Category C₂ includes six other specific secondary infections which were not included in the definition of AIDS in 1986; however, *recurrent salmonella bacteremia* and *disseminated mycobacterial tuberculosis* have been added as AIDS indicator diseases.

Subgroup D: Secondary Cancers

Patients must have one or more kinds of cancer associated with HIV infection and at least moderately indicative of a defect in cell mediated immunity. These cancers include:

1. Kaposi's sarcoma
2. non-Hodgkins lymphoma (small non-cleaved lymphoma or immunoblastic sarcoma)
3. Primary lymphoma of the brain

The diagnosis of AIDS can be applied if any of these tumors are present.

Subgroup E: Other Conditions in HIV Infection

This group is defined as clinical findings or diseases not classified above that may be attributed to HIV infection or may be indicative of a defect in cell mediated immunity. Specifically at this time, this group consists of *chronic lymphoid interstitial pneumonitis* in children. This diagnosis meets the criteria for reportable AIDS.

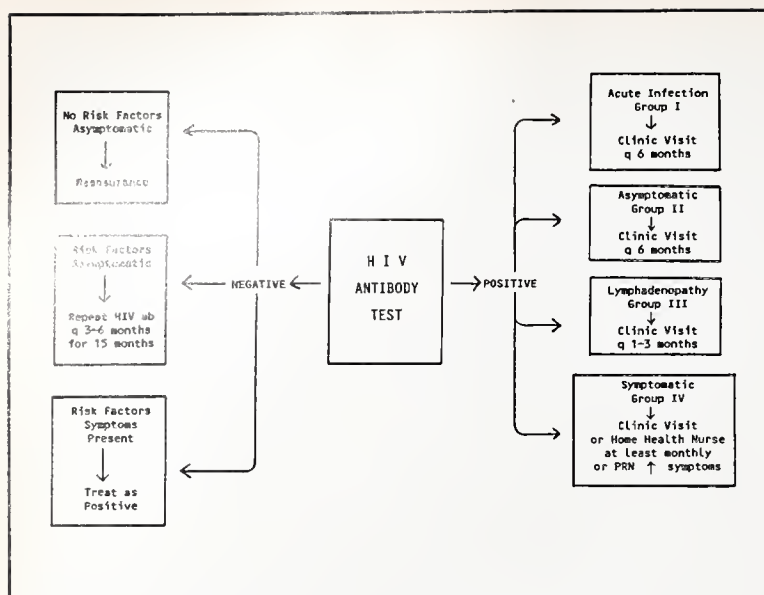


Figure 1. Frequency of follow-up visits.

trials. Whether or not toxicity to the bone marrow will limit its use in patients with early infection is not known at this time.²³ The use of zidovudine is being evaluated in multicenter trials on patients falling into Groups II and III. It is hoped that guidelines will be established soon regarding the use of zidovudine in early stages of the disease.

The FDA reports that as of December 3, 1987, there were investigational studies involving more than 40 antiviral and immunomodulating drugs in the treatment of HIV. The FDA has also approved more than 80 ongoing human studies to test potential drugs for opportunistic infections and cancers. These studies involved nearly 30 agents. Immune system replacement immunomodulators and/or antiretrovirals have not yet provided any clear solutions. The primary care physician is forced to rely on general health maintenance principles and basic diagnostic skills in managing patients with HIV infection.

Malnutrition, stress, depression, cigarettes, alcohol, marijuana, and excessive sunbathing have all been shown to reduce cell mediated immunity²⁴, so patients should be encouraged to get adequate rest, nutrition, and avoid the use of harmful as well as psychoactive agents. Excessive sunbathing should also be avoided.

Patients should also be encouraged to seek social and psychological support through community-based AIDS support groups in order to lessen the depression and isolation which often follows the diagnosis of HIV infection.²⁵ Patients should be educated regarding viral transmission and urged to modify sexual or parenteral contacts.

There is no reporting regulation in Arkansas at this time for HIV positives or contacts, but the Health Department will do contact tracing if a request is made. Confidentiality is respected in accordance with the law.

Early in the course of the disease, the physician should make the patient aware of the possibility of developing HIV dementia. The individual may wish to organize his personal papers and appoint someone, a family member or loved one, to represent him with power of attorney to ensure that his

wishes are heeded. Advance directives should be discussed regarding long term care, critical or intensive care, and resuscitation long before the need arises. When patients understand the natural history of the disease, most elect a "do not resuscitate (DNR)" status and may choose to remain at home and forego extensive hospital care during the terminal stages of the disease.¹

The frequency of follow-up visits is determined by the severity of symptoms (Figure 1). Generally patients who fall into Group I (acute seroconversion) or Group II (asymptomatic) should be followed every 6 months with a brief history and physical assessment, CBC, ESR, and T-cell lymphocyte profile. Patients falling into Group III probably need a frequent follow-up at intervals of 3-4 months with the same laboratory evaluation as Groups I and II.

Group IV patients should be seen at least monthly (or more often if symptoms change). Laboratory studies include CBC and ESR monthly. T-cell lymphocyte profiles and chemistry panels should be done approximately every three months. A flow chart (Figure 2) may be of help in monitoring signs, symptoms, and lab values.

Laboratory results help in directing the management and are shown in Table II.

Although not practical at this time, the Western Blot HIV antibody test and the HIV antigen test can also be used to monitor disease progression. The Western Blot antibody test can be used to predict which patients in Group II (asymptomatic) are progressing to Group IV. The core antibody band p24 drops out as the cell mediated immunity declines and is predictive for progression of the disease toward the emergence of opportunistic infections.²⁶

The lack of antibodies P15, P55, P31, P53 or P64 have also recently been found to be associated with disease progression. After the HIV antigen test becomes commercially available, it may be possible to predict which patients from Group II (asymptomatic) need closer follow-up by

TABLE II. Laboratory results directing the management of the HIV positive patient.

Elevated ESR - suspect opportunistic infection	
<hr/>	
Lowered Hemoglobin	
Lowered Hematocrit	suspect <i>Mycobacterium avium</i>
Lowered Platelets	<i>intracellulare</i> (MAI)
Elevated Alk P'tase	
<hr/>	
Elevated LDH - suspect <i>Pneumocystis carinii</i> pneumonia (PCP)	
<hr/>	
Lowered T ₄ cells - suspect the emergence of opportunistic infections or cancers; consider the use of zidovudine	
<hr/>	
Lowered Sodium	
Elevated Potassium	suspect adrenal insufficiency

Figure 2. HIV Flow Chart

DATE										
PHYSICAL EXAM	Group									
	Weight									
	T/ B/P / P/ R									
	Nails									
	Fundi									
	Oral									
	Chest									
	Nodes									
	Skin									
	Neuro									
	Other									
SYMPTOMS	Fever									
	Sweats									
	Fatigue									
	DOE									
	Chest Pain									
	Cough									
	Sore Throat									
	Abd Pains									
	Headache									
	Dizziness									
	Limb Pain									
Other										
L A B	Hct									
	Hbg									
	WBC									
	Diff Lymph									
	Polys									
	Platelets									
	ESR									
	Total T-cells									
	T ₄									
	T ₈									
	T ₄ :T ₈									
	SGOT									
	GGT									
	LDH									
	Alk P'tase									
	Chól									
	Trig									
Uric A										

TABLE III. Treatment of Opportunistic Infections²⁸

Infection	Treatment	Dosage*	Duration of Therapy	Comments ⁺
<i>Pneumocystis carinii</i> pneumonia	Sulfamethoxazole-trimethoprim or Pentamidine isethionate	20 mg/kg of trimethoprim and 100mg/kg/d of sulfamethoxazole 4 mg/kg/d IV	14-21 d	Consider maintenance therapy (1 D/S tablet bid if well tolerated)
Cryptococcal meningitis	Amphotericin B and Flucytosine	0.4-0.6 mg/kg/d 100 mg/kg/d	6 wk	Maintenance therapy necessary Contraindicated in presence of low white blood cell count
Toxoplasmosis	Sulfadiazine sodium and Pyromethamine in conjunction with leucovorin	4 g/d po 25-50 mg/d po of pyrimethamine and 5-10 mg/d po of leucovorin	6 wk	Reduce doses to 2 g (sulfadiazine), 25 mg (pyrimethamine), and continue indefinitely
<i>Mycobacterium avium-intracellulare</i> complex	***	***	***	No clearly active agent
Cryptosporidiosis	***	***	***	No clearly active agent
Oral candidiasis	Clotrimazole troche or Nystatin swish or Ketoconazole	5 troches/d 500000 U qid 200-400 mg/d	Until resolved	Consider suppression with 1-2 troches daily, 200 mg of ketoconazole
Esophageal candidiasis	Ketoconazole	400 mg/d	Until resolved	Consider maintenance with 200 mg/d of ketoconazole
Cytomegalovirus (disseminated)	9-[2-Hydroxy-1-(hydroxymethyl)ethoxymethyl] guanine	***	***	Investigational
Herpes simplex	Acyclovir sodium	200 mg five times daily	7-10 d	Consider maintenance if recurrence is frequent
Herpes zoster (disseminated)	Acyclovir sodium	10 mg/kg/d IV, 800 mg five times daily po	Until crusted minimum of 5 d	Indications and effectiveness not clear for oral administration
* IV indicates administered intravenously; po, by mouth; qid, four times daily; U, units. + D/S indicates double strength; bid, twice daily.				

using the p24 antigen test. The re-emergence of p24 antigenemia precedes the progression toward opportunistic infection.²⁶

There are good descriptions in the literature of the diagnostic criteria and treatment of opportunistic infections and cancers in persons with AIDS.^{3,27,28} A summary of those opportunistic infections and their standard treatment is found in Table III and a summary of experimental drug treatment for opportunistic infections and cancers is found in Table IV. Treatment of opportunistic infections and cancers in AIDS patients is a palliation rather than a cure. Relapse is inevitable. The use of inhaled pentamidine for prophylaxis of recurrent *Pneumocystis carinii* pneumonia is one of the few recent treatment advances which seems promising.

In the later stages of the disease, the use of home health care nursing visits rather than frequent office visits is most often more comfortable for the patient. The comfort of the patient rather than the palliative treatment of opportunistic infections becomes the paramount therapeutic goal. Until specific therapy becomes available, knowing when to stop invasive or uncomfortable treatment and relieve pain and

suffering is the most important skill needed in treating late stage AIDS patients.

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Table IV. Experimental Agents

EXPERIMENTAL ANTI-INFECTION AGENTS

Experimental Agent	Sponsor	Indication
Trimexate	Warner Lambert Co Morris Plains, NJ (201) 540-2000	Pneumocystis carinii pneumonia (treatment)
Elflornithine (DMFO)	Merrell-Dow Pharmaceuticals Inc (513) 984-9111	Pneumocystis carinii pneumonia (treatment)
Aerosol Pentamidine	Fisons Corporation Bedford, MD (617) 275-1000	Pneumocystis carinii pneumonia (treatment)
Foscarnet	Astra Pharmaceuticals Products, Inc Westboro, MA (617) 366-1100	cytomegaloviral retinitis
Anssmycin (in combination with other drugs)	Adria Laboratories Dublin, OH (614) 764-8100	Mycobacterium avium- intracellular infection (Mycobacterium tuberculosis)
Spiramycin	Rhone-Poulenc Inc Mormouth Junction, NJ (201) 297-0100	cytosporeidiosis (eukaryotic organism that can cause chronic diarrhea)
Fluconazole	Pfizer, Inc New York, NY (212) 573-2323	cryptococcal meningitis candidiasis
Ganciclovir (DHPG)	Syntex Corporation Palo Alto, CA (415) 855-5050	life- or sight- threatening cytomegalovirus

EXPERIMENTAL ANTI-NEOPLASTIC AGENTS

Experimental Treatment	Sponsor	Indication
Lymphoblastoid interferon	Burroughs Wellcome Co Research Triangle Park, NC (919) 248-3000	Kaposi's sarcoma
R-beta-ser interferon	Triton Biosciences Alameda, CA (415) 769-5200	Kaposi's sarcoma
Piritrexim Isethionate	Burroughs Wellcome Co Research Triangle Park NC (919) 248-3000	Kaposi's sarcoma
Doxorubicin	National Institute of Allergy & Infectious Diseases, Bethesda MD (301) 496-5717	Kaposi's sarcoma
Note: Doxorubicin is an approved commercially available anti- cancer agent. This is an experimental use of the drug.		
Menogaril	National Cancer Institute, Bethesda, MD (301) 496-6641	Kaposi's sarcoma
M-Bacod	National Institute of Allergy & Infectious Diseases, Bethesda, MD (301) 496-5717	primary lymphoma
R-alpha-interferon	Hoffman-La Roche, Inc Nutley, NJ (201) 235-5000	Kaposi's sarcoma
R-alpha-2B interferon	Schering-Plough Corp Kenilworth, NJ (201) 558-4000	Kaposi's sarcoma

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Note: A more complete list of references is available by contacting the Journal at the Arkansas Medical Society office.

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“Legally Speaking”

RE: Mandatory Assignment - Is it Really Legal?



Michael W. Mitchell, J.D.*

In 1985 the Massachusetts legislature and Governor Dukakis shocked the medical community by enacting a law requiring physicians, as a condition to licensure, to accept mandatory assignment for Medicare patients. Pertinent portions of the Act provide that the Massachusetts Medical Board shall, to-wit:

...require as a condition of granting or renewing a physician's certificate of registration, that the physician, who if he agrees to treat a beneficiary of health insurance under Title XVIII of the Social Security Act, shall also agree not to charge to or collect from such beneficiary any amount in excess of the reasonable charge for that service as determined by the United States Secretary of Health and Human Services.

On the basis of usurping the purposes of the Medicare Act and upon due process grounds, the Massachusetts Medical Society (MMS), the AMA and an individual physician filed suit against Governor Dukakis and others to declare the law unconstitutional.¹

The MMS first argued that the mandatory assignment law violated the supremacy clause of the United States Constitution in that (1) it stood as an “obstacle” to the objectives of the Medicare Law; (2) its regulation of Medicare patients was preempted by the Medicare law; and (3) it interfered with the *right* to balance bill created by the Medicare Act.

To determine whether a state law stands as an “obstacle”, the court must determine whether there is either “a congressional design to preempt the field” or “such actual conflict between the two schemes of regulation that both cannot stand in the same area.”² The Court concluded that Congress had not manifested any intent or design to exclude state regulation from the field of physician billing of Medicare patients.³ The Court pointed out that the states play a

role in determining who shall practice medicine and subject to what conditions and that this includes, to-wit:

...more than the regulation of technical proficiency. The economics of physician practice play a role in both the practice of medicine and the licensure and supervision of physicians...⁴

The Court said that Medicare evidences “...a congressional design to occupy only a limited portion of the broad ‘field’ of medical care for the elderly.”⁵ Therefore, the Court concluded that Congress did not intend to preempt state regulation so broad that it would preclude the mandatory assignment law in Massachusetts.

The Court next rejected the argument that the mandatory assignment law was an “obstacle” to the accomplishment and execution of the purposes and objectives of the Medicare law, i.e., providing access to medical care for the elderly (also covers disabled). The Court first found that the MMS did not have standing to advocate that the mandatory assignment law would restrict access to medical care by the elderly since there was an “obvious conflict of interest” between the physician and the elderly patients.⁶ However, the Court further found that even if the MMS had standing to argue the issue of restricting access to elderly patients the plaintiffs would still lose. The evidence admitted to support the argument included testimony of physicians and testimony of experts. The physicians testified that they had stopped or would stop treating Medicare patients and others testified that they would leave or had left the state. The Court found that the physician testimony had little weight to prove that the mandatory assignment law would diminish access because the few physicians who testified were “neither random nor representative” of the thousands of physicians in Massachusetts as to how they would behave under the new law.⁷ Furthermore, the Court said the statements were made “...with this litigation and the ongoing political debate in mind.”⁸ The Court likewise rejected the expert testimony of a health care economist who testified that the new law would (1) reduce the supply of

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physician services; (2) cause a significant number of physicians to choose not to come to the state or leave the state or refuse to treat Medicare patients; (3) restrict access in rural areas; (4) increase total Medicare expenditures; (5) discourage innovation in medical treatment; and (6) discourage the best qualified physicians to treat Medicare patients. The Court found that the expert testimony was "neither sufficiently founded nor sufficiently persuasive" to support a finding that access to medical care would be impaired.⁹ The court found that the testimony was in conflict and inconsistent. For example, the contention that the new law would cause a reduction of physician services and the conclusion that there would be an increase in Medicare expenditures was inconsistent. The Court found that the second of the alternatives was more likely to occur based upon the result of the price controls during the Nixon administration which saw a greater number of services being performed. The Court found that "...physicians faced with a limit on fees will have an incentive to increase the volume of services provided in order to maintain their income level."¹⁰ The Court went on to make an inconsistent finding itself at page 697-698 as follows, to-wit:

I find that any opinion founded on the assumption that Massachusetts physicians will act wholly, or even in large part, on the basis of purely economic factors is not deserving of significant weight. (The testimony fails)...to take into the account the extent to which noneconomic incentives motivate physician behavior--for example, a physician's pride in his work or her work, commitment to the ethic of care of the profession, personal concern for his or her patients, an intellectual curiosity are the best and newest methods of treatment.

Furthermore, the Court found that the statements that physicians would leave the state because of economic factors were not persuasive, since Massachusetts is among the state with the lowest physician income but also has the highest number of physicians per capita. The Court did find that there were "troubling" elements of the expert testimony, particularly with respect to medical care access in rural areas. However, *the Court concluded that it was inappropriate "...to make...its own determination of the wisdom of the challenged act..."*¹¹ *It was up to the legislature to determine the wisdom of the Act.* In conclusion, the Court found that the plaintiffs had failed to prove the mandatory assignment law would reduce access to medical services.

Finally, it was argued that the supremacy clause was violated because Medicare created a "right" to balance bill, and the mandatory assignment law interfered with this right. However, the Court found that federal law simply "...permitted physicians to balance bill but did not require balance billing." Furthermore, the Massachusetts law did not require physicians to treat Medicare patients but affected them only if they chose to do so.

The final argument made by the MMS was that the

Massachusetts law violated the due process clause of the Fourteenth Amendment, since the condition of licensure was not related to a physician's "fitness or capacity to practice." The defendants argued, however, that it was only necessary for the act to bear a "...rational relationship to a legitimate state purpose."¹² The Court adopted the test presented by the defendants. It concluded that since medical costs are a serious problem for the elderly and since conditional licensure is an effective means of obtaining and controlling medical costs for such population, the mandatory assignment law was rationally related to a legitimate state purpose. The Court said that even if the plaintiffs' test was accepted, the challenge would still fail. The court stated that "fitness and capacity" was to be determined by a narrow construction and that the state had "...power to require those licensees who choose to treat a particularly needy segment of the population to do so for limited fees..."¹³ The court concluded as follows, to-wit:

*The legislature's determination as a matter of legislative fact that the provision of cost contained services to the elderly is a necessary part of what it means to be fit and capable to practice in this state is not outside the bounds of what the due process clause permits.*¹⁴

The Court pointed out that the requirement had been upheld many times for lawyers to serve some clients at little or no charge or to perform "pro bono" work or to accept without compensation a court appointment to represent a needy client.¹⁵

The case was appealed to the First Circuit Court of Appeals which affirmed the lower court decision.¹⁶ The First Circuit Court of Appeals found the language of the Medicare Act did not "...explicitly...(preempt) state authority in the field of fee regulation of medical services for the elderly."¹⁷ Furthermore, the Court found that Congress did not intend "...implicitly to withdraw the power of states to regulate medical fees."¹⁸ The Court conceded that it was "ambiguous" as to whether Congress intended to create a "right" to balance bill.¹⁹ However, the Court found that it was up to the MMS to show "unmistakably" that Congress intended to create a right and it had failed in that burden. Furthermore, the Court agreed with the trial court "...that the Massachusetts balance billing ban does not pose a significant 'obstacle', constitutionally speaking, to any congressional 'purpose' or objective in the Medicare Act."²⁰

With respect to the due process argument, the First Circuit Court of Appeals seems to agree with the MMS that the test to determine the constitutionality is whether the law is "rationally" connected with a doctor's 'fitness or capacity to practice' medicine."²¹ The MMS argued that the condition of the mandatory assignment law--a promise not to balance bill--is not rationally related to a doctor's fitness or capacity to practice medicine. However, the court responded in its conclusion as follows, to-wit:

In our view...this 'promise' simply amounts to a rule. It is a rule that forbids balance billing. And, there is nothing irrational about a state's saying that a doctor, entering the profession, must promise to follow the rules. Nor is it irrational to say that the doctor who seriously violates the rule--who commits a violation that is 'commensurate with' the penalty of licensure revocation--is not 'fit' to practice medicine.²²

The writ of certiorari to the United States Supreme Court was denied on November 15, 1987.²³ It is unlikely that the Supreme Court will review this decision unless a different conclusion is reached in another circuit.

In the meantime, however, the federal courts in the First Circuit have approved as legal a state imposed form of socialized medicine. The fallacy of the law is that it assumes all elderly patients are "needy." Many older citizens in the State of Arkansas are more than able to pay for their own medical care - many being very wealthy. Furthermore, common sense dictates it is fruitless to balance bill someone who cannot afford to pay. Most physicians in Arkansas accept assignment in cases of the truly "needy" patient.²⁴ Therefore, mandatory assignment laws do not benefit the "needy" patient at all, but relieve those patients who can afford to pay a reasonable medical bill. State mandatory assignment, therefore, simply invites an increase in medical fees for those patients not covered by Medicare. However, the courts will not examine the wisdom of a challenged law. The wisdom of a law is determined by the various state

legislatures. It is up to practicing physicians to convince state legislative bodies that a mandatory assignment law is unnecessary and destructive.

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23. Massachusetts Medical Society v. Dukakis, 108 S.Ct. 229 (November 15, 1987).
24. Fifty-three percent of Arkansas' practicing physicians accept assignment on all Medicare patients. Eighty percent of all claims submitted in Arkansas are paid on the basis of assignment.

Bilateral Distal Femoral Epiphyseal Fractures Following Home Delivery: A Case Report

*Frances L. McCollough, R.N.P. and Richard E. McCarthy, M.D.**

A case study is presented of a five-day-old white female who suffered bilateral distal femoral epiphyseal fractures and subsequent bilateral septic knees. The delivery occurred at home with nurse-midwives in attendance. The child was delivered as a footling breech and required a significant amount of traction on the legs to be delivered. The need for both physician and public education regarding the role of nurse midwives and home vs. hospital delivery is discussed.

Introduction

Injuries to the epiphysis can be devastating at any point prior to the completion of growth. This newborn suffered a potentially severe injury to both distal femoral growth plates at the time of delivery and subsequently developed septic arthritis of both knees with bacteremia. This case is reported to emphasize the importance of exercising good obstetrical judgement even in the home setting and the need for careful post-natal assessment of newborns.

Case Report

A five-day-old white female presented to the emergency room with the chief complaint of a swollen left knee. The infant also had been febrile to 101 degrees in the 24 hours prior to admission, had mild swelling of the right knee, and decreased movement of both lower extremities. Past medical history was significant in that the mother had received little prenatal care and that the infant was delivered as a footling breech, at home, with two midwives and the patient's father in attendance. By history, a significant amount of traction was applied to the baby's legs over a four hour period to affect delivery. The infant was limp, blue, and

unresponsive for approximately 60 seconds following delivery and resuscitation was necessary. The mother resisted the recommendations of the midwives to be transported to the hospital, preferring to deliver at home despite the difficulties encountered. The infant was thought to be doing well until three days of age when she was noted to be jaundiced. At that time she was evaluated in the emergency room; a bilirubin was within normal limits. The rest of the examination at that time was said to be unremarkable and the child returned home.

The mother brought the infant back to the emergency room two days later for swelling in the legs. Physical exam revealed a well-nourished, well-developed white female with a weight of three kilograms. The lower extremities were swollen from just above the knee to mid-calf with hot, tender, knee joints bilaterally, the left greater than the right. Active and passive range of motion was decreased in the left knee with hypotonia in both lower extremities.

Laboratory data showed a white count of 35.3 with 58 polys, 19 lymphs, 13 monos, 9 bands, and 1 meta. Sedimentation rate was 60. Aspirate of the left knee yielded 10 cc's of grossly purulent material. Gram stain showed many polys with occasional short chains of gram positive cocci. Right knee aspiration yielded 3 cc's of serous yellow fluid. Blood, urine and cerebrospinal fluid (CSF) cultures were also obtained. The hips were aspirated at the time of surgery but

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Figure 1. AP and lateral radiographs show bilateral posteriorly displaced femoral epiphyseal fractures.

yielded no fluid. Final culture reports of the knee aspirate and blood showed beta strep group B. There was no growth from the urine or CSF.

Radiographs showed a large amount of soft tissue swelling, and bilateral minimally displaced distal femoral epiphyseal fractures and a left proximal tibia fracture (Figure 1). A fractured clavicle was also found during her hospitalization, and was felt to be secondary to birth trauma. A bone scan revealed no other abnormalities.

The patient was taken to the operating room for irrigation and debridement of both knees with insertion of ingress and egress tubes. Both lower extremities were splinted. Intravenous antibiotics were started after cultures were drawn. Following discontinuation of the ingress and egress tubes at 48 hours, long leg casts were applied without further reduction of the fractures. She was discharged after a 14-day course of intravenous ampicillin and gentamycin, and continued on a three week course of oral ampicillin. Immobilization was discontinued within a month. The wounds healed well and there were no signs of recurrent septic arthritis. Additional examinations were performed at two months, five months, and eight months of age. There was normal alignment of the lower extremities with full active range of motion. The growth plates appeared open; however, there remained concern for a possible growth arrest in the central portion of the right distal femoral epiphysis (Figures 2a and 2b). Examination at eight months of age, in another state, showed no change but further follow-up is not available.

Discussion

There are a number of reasons that a woman might choose to deliver her baby at home rather than in a hospital. Hopefully, the birth would be attended by licensed nurse

midwives with a physician backup. The more comfortable and familiar environment of the home decreases the stress on the mother and allows other family members to actively participate in the birth. The opportunity for bonding is supposedly also increased in the home setting.¹ Clients with previous experience with nurse practitioners have also cited the increase attention they felt they received from the nurse as opposed to the physician.²⁻⁶ Cost of home delivery with a nurse midwife in attendance compared to hospital delivery with an obstetrician is also a factor in the decision to deliver at home.⁷ However, the obviously increased safety for both the mother and infant in the hospital setting cannot be



Figure 2a. Radiographs four months later with healing fractures and early remodeling.

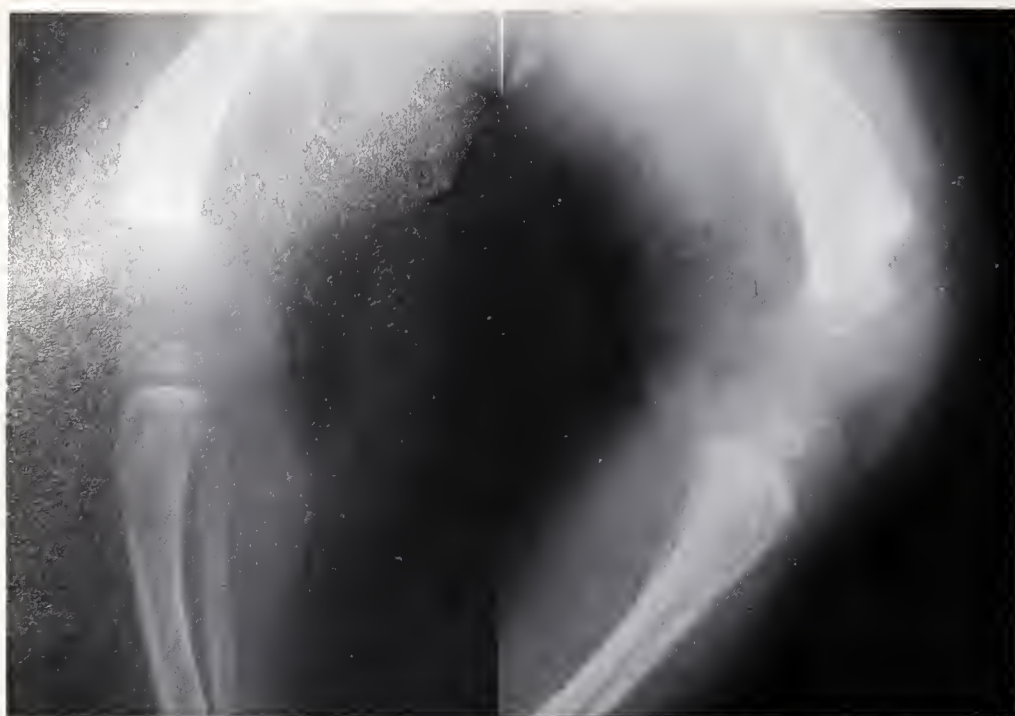


Figure 2b. Radiographs four months later with healing fractures and early remodeling.

ignored as a major factor in choosing the delivery setting. The birthing process within the hospital setting has been enhanced by the use of special birthing rooms, allowing fathers and siblings to participate in the birth process, and the infant remains with the mother rather than being rushed off to the nursery. These developments offer many of the advantages of a home delivery with the safety of the hospital setting.^{1,8}

While it is not the purpose of this discussion to debate the "rightness" or "wrongness" of home births, there are some important lessons to be learned from this case. One lesson is that there must continue to be efforts to educate consumers of health care in regard to options available to them and insure that they have the necessary information to make an informed decision. The public should also know when home delivery is inappropriate and be aware of recent innovations in hospital delivery settings. Efforts should continue to insure that those practicing as midwives are appropriately trained and have a clear knowledge of indications for referral to a physician.

Physician awareness of the role and function of the nurse midwife would greatly enhance the care of the expectant mother.⁷ Allowing the licensed nurse midwife to function within the hospital setting could contribute greatly to the quality of care to expectant families.⁷ The nurse midwives attending this delivery repeated recommended transfer to the hospital during the difficult delivery. The mother refused.

The first few weeks of life can indeed be perilous for the newborn. Any illness has the potential to be life-threatening due to the neonate's inability to localize infections. One unanswered question in this case is the etiology of the sepsis. Although the cause of sepsis and septic joints is frequently unknown, introduction of the infectious agent at the time of delivery under unsterile conditions must be considered. Fortunately this infant did not develop meningitis which would have added to the list of possible sequelae.

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demonstrated less alteration in steady-state theophylline peak serum levels with the 800 mg. h.s. regimen, particularly in subjects aged 54 years and older. Data beyond ten days are not available. (Note: All patients receiving theophylline should be monitored appropriately, regardless of concomitant drug therapy.)

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The Effects of Non-Steroidal Anti-Inflammatory Agents on Psoriasis

*Coleman Kent, M.S. and Susan B. Mallory, M.D.**

Introduction

Psoriasis is a common chronic skin disease that affects 1-3% of the American population. The true incidence may be even higher, because individuals with minor clinical manifestations do not always seek medical attention. Men and women are equally affected and women tend to have an earlier onset of the disease.

Skin lesions of psoriasis usually first appear between 20 to 50 years of age with a mean of 28 years, but may appear as early as birth or as late as 80 years. Regardless of the age of onset, patients face a lifelong struggle to eradicate the erythematous scaling plaques that may be a source of anxiety and embarrassment.

In ancient times, people considered psoriasis a form of leprosy. The Biblical term "lepra" probably included what is now known as psoriasis in addition to several other skin diseases such as vitiligo. Undoubtedly, many psoriatic patients suffered the same physical and mental abuse as did "lepers" of that era. Confusion between leprosy and psoriasis lasted for almost 19 centuries. Not until 1841 was the word "lepra" eliminated in the description of psoriasis.

Psoriasis is classified as a papulosquamous disease of unknown etiology, probably inherited as an autosomal dominant trait. The primary lesion is an erythematous papule topped by a silvery scale. Either gradually or explosively these papules coalesce to form larger plaques of varying shapes and patterns. The plaques may be coin-shaped (guttate), geographic, annular or circinate (ringlike), figurate, gyrate or serpiginous. Extensor surfaces of the skin are most commonly affected, especially the elbows, knees, scalp, groin, and nails.

Pathogenesis

Psoriasis is a complex metabolic disease which affects primarily the skin. Clues to the metabolic derangements are just now unfolding. The irregular course suggests that psoriasis is not a permanent disease, but rather that the enzyme function is intermittently misregulated. The arachidonic-leukotriene (AA-LT) system is ultimately involved in this misregulation and since non-steroidal anti-inflammatory agents (NSAIA) alter these pathways, a new dermatologic therapy for psoriasis may be on the horizon.

Psoriatic skin has been characterized by an increased turnover of epidermal cells, thickened epidermis, abnormal keratinization, inflammation in the dermis, and polymorphonuclear leukocyte migration into the epidermis.¹ In normal epidermis, the basal cell cycle is 450 hours, but in psoriatic lesions it is reduced markedly to 37.5 hours. The S-phase (growth phase) which is normally 16 hours, is 8.5 hours in psoriatic lesions with an epidermal transit time 7 times faster than normal.

Biochemical abnormalities implicated in the pathogenesis of psoriasis include changes in cyclic AMP (c-AMP), cyclic GMP (c-GMP), polyamine metabolism, proteases and arachidonic acid (AA) metabolism. Changes in cyclic nucleotide generating and degrading systems may alter enzyme activities in skin. Also, polyamines may be involved in the pathogenesis of psoriasis because they tightly bind nucleic acids and proteins. Polyamines, such as spermidine and spermine have been shown to be elevated 2 to 3 times normal in the sera of psoriatic patients. Furthermore, ornithine decarboxylase which regulates polyamine synthesis has a prolonged half-life in hyperproliferative psoriatic epidermis. Proteases are also increased in psoriasis and stimulate epidermal cell proliferation, as well as increasing chemotactic activity of polymorphonuclear leukocytes.

Alterations in the arachidonic acid metabolic pathway play an important role in the pathogenesis of psoriasis. The

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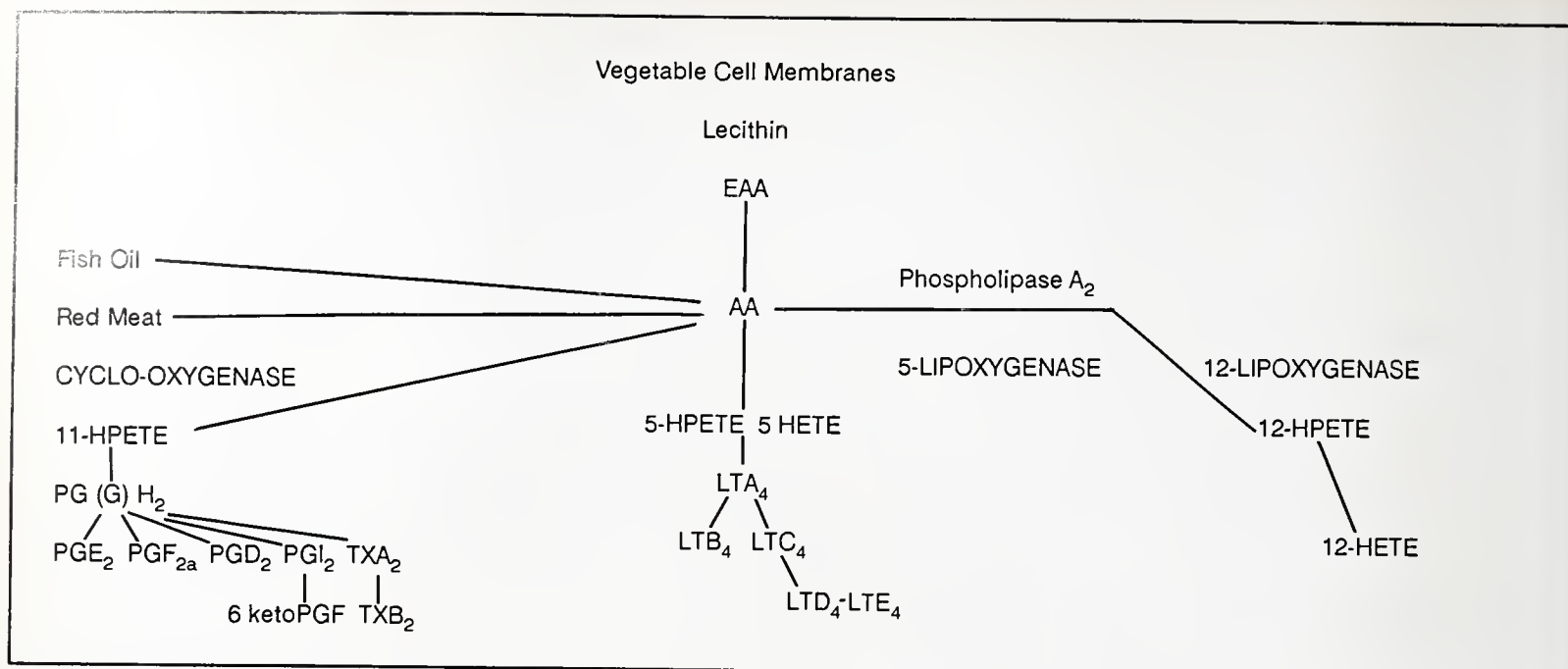


Figure 1. Arachidonic Acid Metabolism. AA = arachidonic acid; PG = prostaglandin; HPETE = hydroperoxyeicosatetraenoic acid; HETS = hydroxyeicosatetraenoic acid; EAA = esterified arachidonic acid; LT = leukotriene.

metabolism of arachidonic acid is depicted in Figure 1. Arachidonic acid is obtained in the diet from red meat cellular membranes or derived from essential fatty acid precursors in leafy green vegetables and certain oils. Arachidonic acid is esterified and utilized in tissue membranes and ultimately acts as the precursor to numerous biologically active moieties. Arachidonic acid is the most abundant free fatty acid in the skin, and is released from membrane phospholipids through the activation of the enzyme phospholipase A₂ and other lipases. Arachidonic acid is the major precursor of prostaglandins (PG), hydroxyeicosatetraenoic acids (HETE), thromboxanes (TX) and leukotrienes (LT). There are several known pathways of arachidonic acid metabolites, but mediators of inflammation are synthesized through one of three: 1) the cyclo-oxygenase pathway; 2) the 5-lipoxygenase pathway; or 3) the 12-lipoxygenase pathway.

Phospholipase A₂ splits arachidonic acids from cell membrane phospholipids. In psoriatic patients, phospholipase A₂ activity is increased not only in the involved epidermis but also in uninvolved epidermis. Phospholipase A₂ activity can be modified by ultraviolet light, some topical ointments, histamine, bradykinin, prostaglandins, calcium, and cutaneous insults or irritants. Involved epidermis contains more free arachidonic acids than uninvolved epidermis², apparently from increased phospholipase A₂ activity. The role of arachidonic acid metabolism in the etiology of psoriasis is further supported by the fact that prostaglandin E₂ injected intradermally produces erythema and increase in epidermal DNA synthesis.

Use of Non-Steroidal Anti-Inflammatory Agents

Non-steroidal anti-inflammatory agents (NSAIA) which alter the arachidonic acid metabolism have been used in the

treatment of psoriasis. When the cyclo-oxygenase pathway is blocked, arachidonic acids from the diet must be channeled into other pathways, such as the 5- and 12-lipoxygenase pathways. The metabolites of these pathways stimulate polymorphonuclear leukocyte migration, which in turn produce leukotrienes, thus creating a vicious cycle.

When arachidonic acid is injected into the normal skin of a psoriatic patient, infiltration of polymorphonuclear leukocytes takes place into the area, which results in an erythematous papule. Pathophysiologically, arachidonic acid is converted to leukotrienes, mainly LTB₄ which stimulates polymorphonuclear leukocyte migration and increases local vascular permeability. LTC₄ and LTD₄ are also increased, which produce redness and swelling that lasts for hours.

Indomethacin has been shown to block proliferation of the epidermis by inhibiting cyclo-oxygenase activity, and thus preventing prostaglandin formation. Indomethacin can exacerbate psoriasis, probably by increasing LTB₄ levels.

Indomethacin inhibits epidermal proliferation but does not inhibit polymorphonuclear leukocyte migration, suggesting that inflammation is mediated by the enzymes 5-lipoxygenase and 12-lipoxygenase. Eicosatetraenoic acid, which blocks both cyclo-oxygenase and 5- and 12-lipoxygenase pathways, inhibits polymorphonuclear migration and edema in involved skin.

Benoxaprofen, a weak inhibitor of cyclo-oxygenase, is a powerful inhibitor of 5-lipoxygenase, thereby reducing leukotriene biosynthesis. Kragballe and Herlin³ found that benoxaprofen markedly improves psoriasis but side effects, such as photosensitivity, onycholysis, diarrhea, edema and nausea, make it less than ideal.

Approximately half of the patients with severe intractable psoriasis can benefit from benoxaprofen therapy.^{4,5,6}

Benoxaprofen, better known under the trade name Opren in the United Kingdom was removed from the market because of severe side effects, including death. Most of the deaths were in elderly patients with renal and/or hepatic disease.⁷

Anecdotal reports of *meclofenamate* (Melcomen)^{8,9} were encouraging at first, which inspired additional research. However, oral meclofenamate does not improve psoriatic lesions.^{10,11,12} In other studies, 1% meclofenamate cream actually made psoriatic lesions worse than control lesions.¹³

In uncontrolled trials, *naproxen* for the treatment of psoriatic arthritis has improved skin psoriasis. However, in a controlled study, naproxen 250 mg three times per day for 6 months had no notable effect on the evolution of psoriasis.¹⁴

Ibuprofen has been shown to reduce the side effects of inflammation induced by ultraviolet exposure.¹⁵ This agent interferes with prostaglandin formation and improves erythema caused from the treatment of psoriasis with ultraviolet light. It does not exacerbate psoriatic lesions.

Conclusion

Non-steroidal anti-inflammatory agents undoubtedly influence the arachidonic acid metabolic pathway. Those agents which block cyclo-oxygenase (e.g., indomethacin)¹³ appear to exacerbate the psoriatic process by enhancing leukotriene biosynthesis. Agents which block lipoxygenase activity (e.g., benoxaprofen) improve psoriatic lesions by preventing leukotriene biosynthesis. Of these agents, benoxaprofen in the past had been successful in the treat-

ment of psoriasis. It is hoped that in the future another lipoxygenase inhibitor with reduced risks will emerge.

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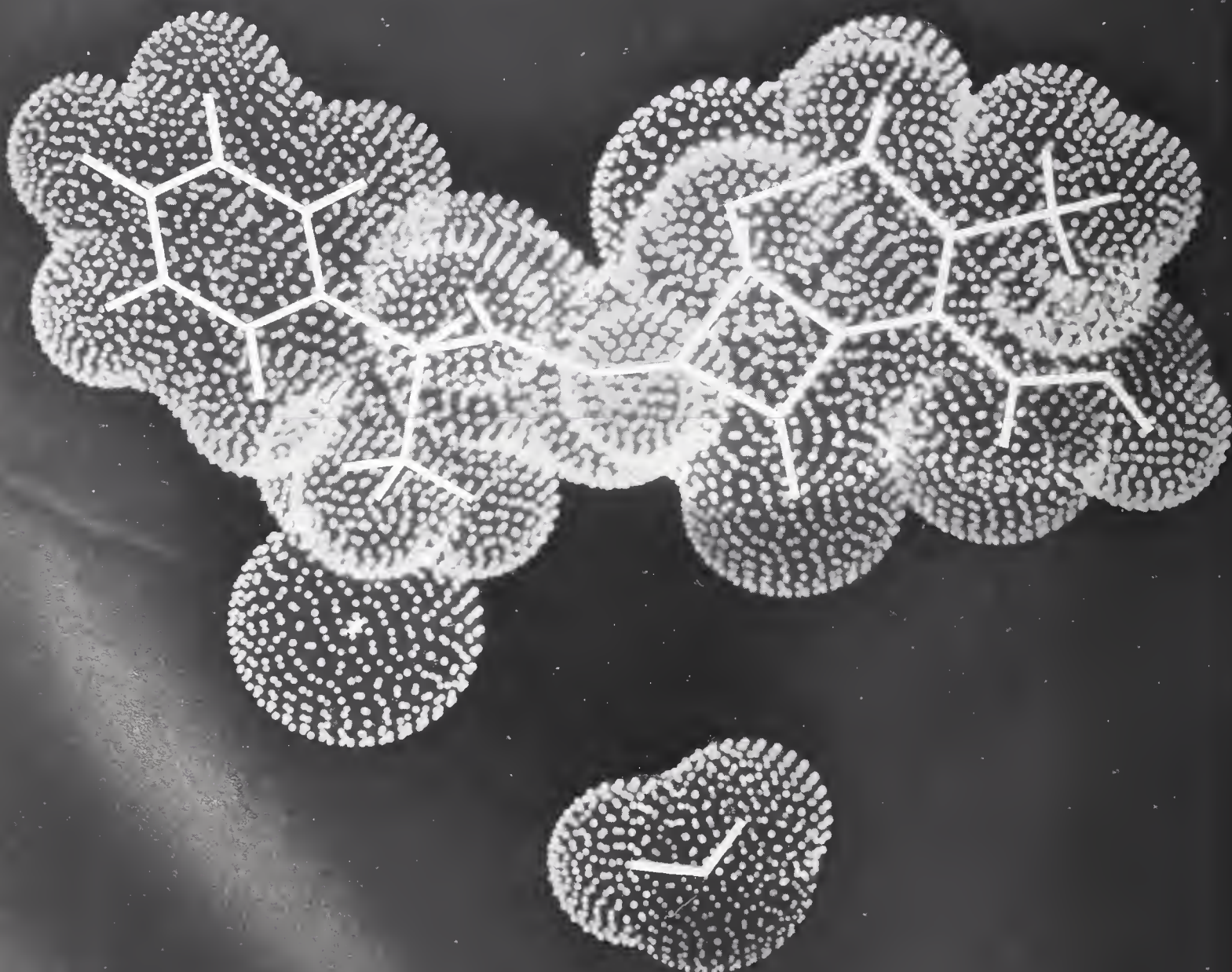
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Contraindication: Known allergy to cephalosporins.

Warnings: KEFTAB SHOULD BE ADMINISTERED
CAUTIOUSLY TO PENICILLIN-SENSITIVE PA-
TIENTS. PENICILLINS AND CEPHALOSPORINS
SHOW PARTIAL CROSS-ALLERGENICITY. POSSI-
BLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with
virtually all broad-spectrum antibiotics. It must be
considered in differential diagnosis of antibiotic-
associated diarrhea. Colon flora is altered by broad-
spectrum antibiotic treatment, possibly resulting in
antibiotic-associated colitis.

Precautions:

- Discontinue Keftab in the event of allergic reac-
tions to it.
- Prolonged use may result in overgrowth of nonsus-
ceptible organisms.
- Positive direct Coombs' tests have been reported
during treatment with cephalosporins.
- Keftab should be administered cautiously in the
presence of markedly impaired renal function. Al-
though dosage adjustments in moderate to severe
renal impairment are usually not required, careful
clinical observation and laboratory studies should
be made.
- Broad-spectrum antibiotics should be prescribed
with caution in individuals with a history of gas-
trointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined
in pregnancy and lactation. Cephalexin is excreted
in mother's milk. Exercise caution in prescribing
Keftab for these patients.
- Safety and effectiveness in children have not been
established.

Adverse Reactions:

- *Gastrointestinal*, including diarrhea and, rarely, nau-
sea and vomiting. Transient hepatitis and chole-
static jaundice have been reported rarely.
- *Hypersensitivity* in the form of rash, urticaria, angio-
edema, and, rarely, erythema multiforme, Stevens-
Johnson syndrome, or toxic epidermal necrolysis.
- *Anaphylaxis* has been reported.
- *Other reactions* have included genital/anal pruri-
tus, genital moniliasis, vaginitis/vaginal discharge,
dizziness, fatigue, headache, eosinophilia, neutro-
penia, and thrombocytopenia; reversible interstitial
nephritis has been reported rarely.
- Cephalosporins have been implicated in trigger-
ing seizures, particularly in patients with renal
impairment.
- *Abnormalities in laboratory test results* included
slight elevations in aspartate aminotransferase
(AST, SGOT) and alanine aminotransferase (ALT,
SGPT). False-positive reactions for glucose in the
urine may occur with Benedict's or Fehling's solu-
tion and Clinitest® tablets but not with Tes-Tape®
(Glucose Enzymatic Test Strip, USP, Lilly).



ELECTROCARDIOGRAM OF THE MONTH

Bart Throneberry, M.D.
John W. Watson, M.D.
UAMS Division of Cardiology
Little Rock, Arkansas

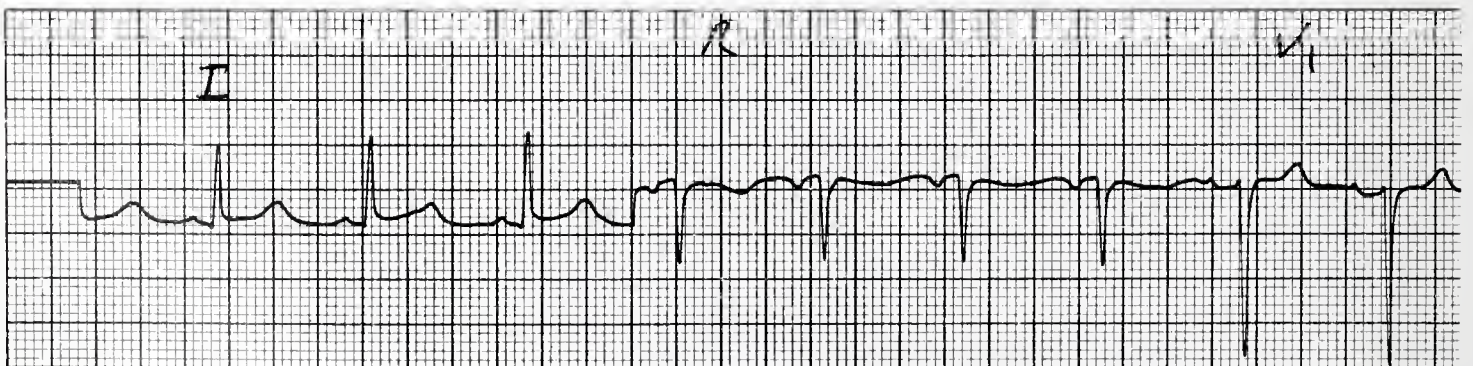
CLINICAL HISTORY:

L. S. is a 21-year-old black man who presented to the hospital because of chest pain. The pain had been present for twenty-four hours. It was eased somewhat with assumption of a sitting position. Physical examination revealed a three component pericardial friction rub. What do you think about his electrocardiogram?

DISCUSSION:

The patient is in sinus rhythm. He has an element of ST elevation in I, II, and V2 through V6 along with diffuse but nonspecific T wave changes. Young black men may have findings on their electrocardiograms similar to these changes as variants of normal. However, the clinical information strongly implies pericarditis. The ECG changes are compatible with this entity.

The editor wishes to thank Dr. Throneberry, of Conway, Arkansas for his assistance with this month's feature.



Angioscopic Evaluation of Vascular Anastomoses of the Lower Extremities in the Canine Model

Timothy C. McCowan, M.D., M. Kyle McAlister, B.S., Ernest J. Ferris, M.D., Kenneth V. Robbins, M.D., Robert W. Barnes, M.D. and Max L. Baker, Ph.D.*

Angioscopes are catheters containing flexible fiber optic bundles that have been miniaturized for use in the vascular system. Fiber optic catheters have been utilized in the past to evaluate the vascular system, but they were generally too large to employ on a routine basis or apply outside the operating room. Both venous and arterial vascular anastomoses of the lower extremities were performed in a canine model to test the ability of the newer angioscopic designs in current usage - that of a single balloon catheter and that of a coaxial catheter system - were used. The current generation angioscopes are able to provide good to excellent resolution of anastomotic suture lines in most cases. The most pressing current challenge is adequate displacement of blood from the field of view to allow visualization of intraluminal vascular anatomy.

Introduction

A large number of vascular surgical procedures are done in the United States every year. The success of these procedures depends to a large measure upon the quality of the vascular anastomoses performed. Only two methods are readily available to evaluate the integrity of these vascular anastomoses. The first is direct inspection of the suture line at the time of surgery. While invaluable during surgery itself, once the anastomosis is completed intraluminal disarray of the suture line may not be evident. The second method is angiography.

Over the years, a variety of instruments, both rigid and flexible, with standard and fiber optic light sources, have been used to visualize intraluminal structures. In most instances, these instruments were large, difficult to use, and

necessitated open arteriotomy or venotomy in the surgical suite.¹⁻⁷ The continued refinement and miniaturization of the angioscope has renewed interest in using this technology in an assortment of possible clinical situations.⁸⁻¹¹ This study evaluates the ability of two recently developed angioscopes to accurately visualize vascular anastomoses of the lower extremities in a canine model.

Materials and Methods

Six adult mongrel dogs weighing 14 to 27 kilograms were used. The animals were obtained from and used under the supervision of the Department of Laboratory Animal Medicine at the University of Arkansas for Medical Sciences. The animals were anesthetized with ketamine 1-2 mg/kg and maintained on inhalation anesthesia with methoxyflurane during the experiment. The abdomen was entered through a midline incision. The vascular anatomy of the distal abdominal aorta was delineated and proximal vascular control obtained with atraumatic vascular clamps. The femoral arteries were mobilized through skin incisions in both groins.

Multiple vascular anastomoses were performed in each animal. These included end-to-end and end-to-side anastomoses of both the arterial and venous systems. All anastomoses were made with 6-0 blue polypropylene (Prolene, Ethicon, Inc., Somerville, New Jersey) vascular suture. In one animal a synthetic polytetrafluoroethylene (Gortex, W. L. Gore and Associates, Flagstaff, Arizona) vascular graft was placed from the abdominal aorta to the common femoral artery. Bleeding was controlled during the surgery with appropriately placed vascular clamps.

The angioscope was placed in the vessels thorough arteriotomy or venotomy 10-50 cm from the anastomotic site to be observed. The angioscope was advanced until the suture line was directly observed. In most cases, the

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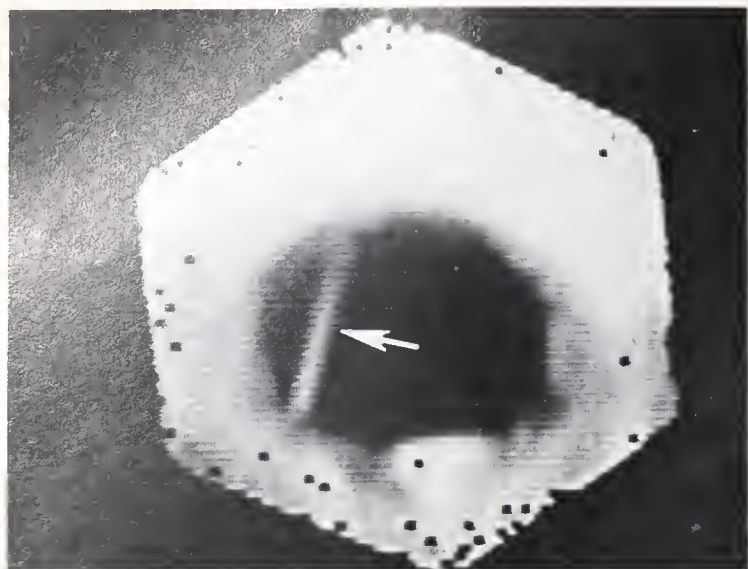


Figure 1a.

angioscopes were easily maneuvered around curves. The intraluminal blood was displaced with a normal saline flush administered either through the angioscope flush port or through the guiding catheter. Proximal vascular control was used when the flush system failed to provide blood displacement. This was necessary in a majority of the cases. A 0.038 inch vascular guidewire was placed through the opposing vascular limb to aid in assessing the patency of the vascular anastomosis when indicated. All procedures were viewed through the angioscopes connected to a video camera which output its image to a color television. All experiments were archived on video tape. The animals were sacrificed at the end of each experiment with an overdose of intravenous anesthesia.

In these studies, two angioscope systems were employed. The first was a single balloon catheter system, the Optiscope, made by Trimedyne, Inc. (Santa Ana, California). This unit had a self-contained inflatable balloon, flushing port, replaceable illuminating fiber, and fixed viewing fibers. It had a working length of 110 cm and a diameter of 3.3 mm (9.9F) at the deflated balloon. The other



Figure 2a.

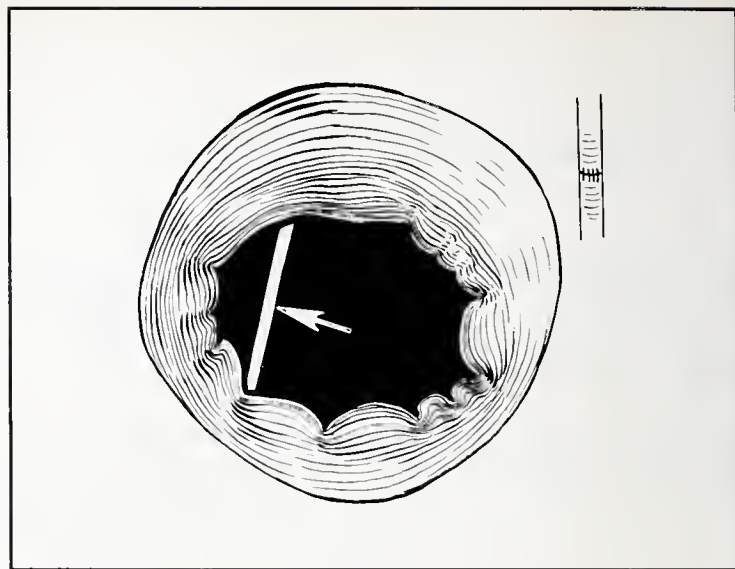


Figure 1b.

angioscope used was the Mini-Flex coaxial system from American Edwards Laboratories (Santa Ana, California). It had a fixed viewing and illuminating fibers, a working length of 135 cm, and a diameter of 1.5 mm (4.5F). This angioscope was placed through a 2.7 mm (8.1F) guiding catheter which gave access to an occlusion balloon and flushing port.

Results

Both current generation angioscopes were easy to use and provided excellent visual resolution and delineation of the intravascular lumen. The anastomotic suture lines could be visualized to some degree in all situations. The patency of the anastomoses could be directly assessed. In the case of a stenotic suture line, the color video camera easily displayed the difference between the pale, whitish, heaped-up intima of a compromised anastomosis and the red of adherent thrombus. The images shown here were taken from some of the experimental work. Unfortunately, image quality is degraded by transfer from the original video display and by converting the pictures to black and white.

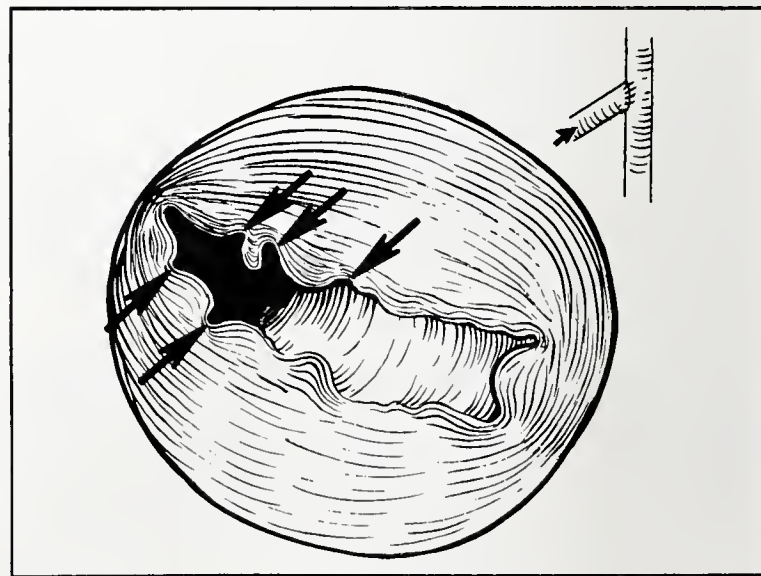


Figure 2b.

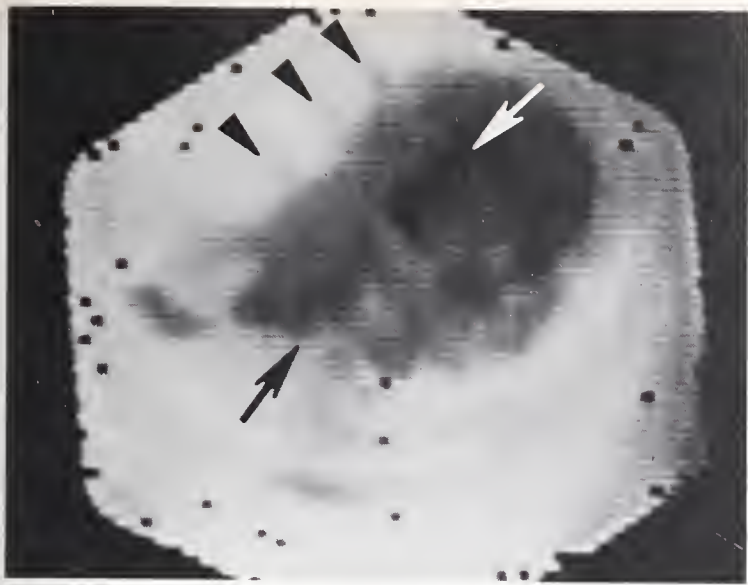


Figure 3a.

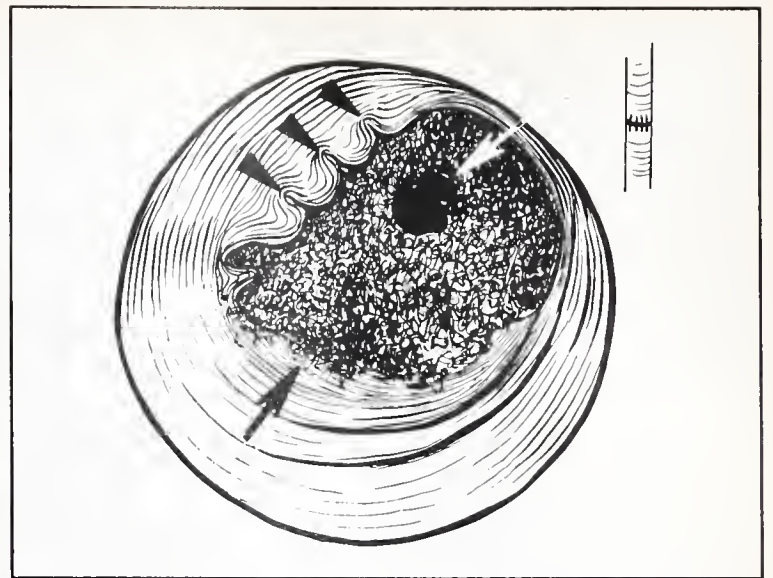


Figure 3b.

The small uniform black dots in the images are broken fiber optic bundles that can no longer transfer the image. This has become a problem only with frequent rugged use.

Figure 1 shows a patent end-to-end arterial anastomosis seen retrograde from the distally placed angioscope. The individual sutures can be seen along the scalloped anastomotic border. An errant suture (arrow) is seen stretched across the vascular lumen. While causing no problems or compromise of the vascular lumen in this case, it could easily provide a nidus for thrombus formation and would be difficult to see at angiography.

An end-to-side saphenous vein graft to the femoral artery is seen in Figure 2. The angioscope is in the venous limb looking at the anastomotic suture line. The striped appearance of a vascular guidewire is noted in the arterial limb of the graft. The guidewire has been placed to provide better evaluation of the patency of the anastomosis. The lumen is widely patent in both limbs and no thrombus formation is noted at the suture line.

Figure 3 is another end-to-end arterial anastomosis viewed by a retrograde approach. The anastomosis is markedly stenotic. Newly formed thrombus is seen to be a bright red. The angioscope could not be passed through the anastomosis.

Figure 4 is taken through the Gortex limb of an end-to-side anastomosis to the external iliac artery. The smooth internal surface of the Gortex can be seen. Considerable bright red, fresh thrombus was noted along the wall of the graft. The anastomotic suture line can be seen and both limbs of the graft were widely patent.

Discussion

Recent technological advances in the manufacture and production of flexible fiber optic endoscopes has allowed this technology to be applied to the vascular system with safety and ease not possible with similar but older optical systems. The optical quality of the new generation angioscopes is excellent and rarely a cause of poor visualization.



Figure 4a.

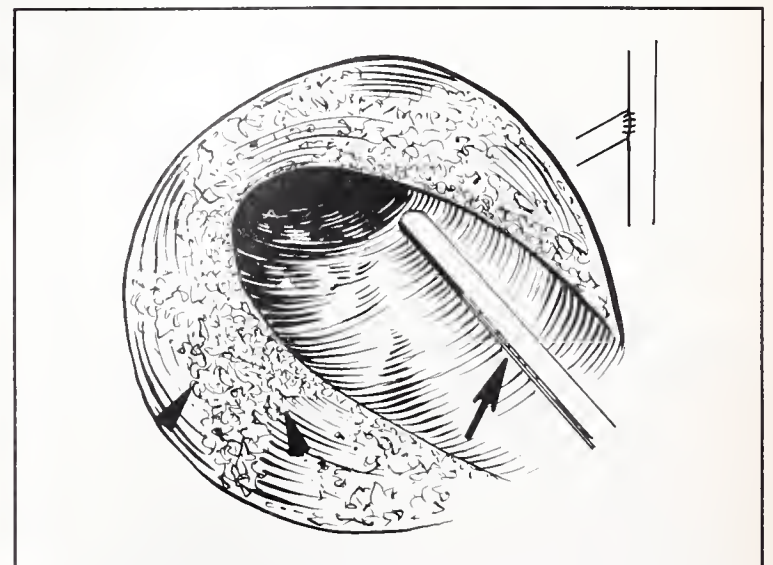


Figure 4b.

The small size and flexibility makes them easy to handle and maneuver in the vascular tree. Angioscopy can now be performed in a manner similar to routine angiography with the development of a percutaneous technique and thus can be used outside the surgical suite.¹²

The risks of angioscopy are basically the same as angiography. These include infection at the puncture site, hematoma formation, intimal dissection, intravascular thrombus promotion, and distal embolization from thrombus or plaque dislodgment. In addition, fluid overload must be considered when using the flush method of blood displacement for visualization. The risk associated with the use of intravascular contrast would be decreased, however.

Currently the most difficult aspect of performing angioscopy is the displacement of blood from the vascular lumen to allow adequate visualization. Two general methods are employed. The first requires the use of an end-balloon catheter through which the angioscope is passed. The intraluminal blood is displaced by the inflated balloon and the vascular wall is seen through the clear plastic balloon. The second more commonly used method is a saline flush system delivered either through the angioscope flushing port or guiding catheter. With proper flow rates and pressures, the blood can be displaced from a limited segment of the vascular lumen allowing good visualization of intravascular anatomy.

Fiber optic technology now permits optically excellent angioscopic evaluation of vascular anastomoses. With the development of a percutaneous technique, angioscopy may be performed outside the operating room. This does, however, remain a very difficult technique percutaneously,

and angioscopy may find its most immediate application in the operating room to assess suture lines at the time of surgery. While angioscopy will not surpass routine angiography in the evaluation of vascular anastomoses, it may be complementary and in some instances provide information about the intraluminal suture line which may normally be obscured by contrast angiography. Further studies comparing angioscopy to angiography and defining the role of angioscopy are indicated.

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INDICATIONS AND USAGE: BECAUSE OF REPORTS OF INTERSTINAL AND GASTRIC ULCERATION AND BLEEDING WITH SLOW-RELEASE POTASSIUM CHLORIDE PREPARATIONS, THESE DRUGS SHOULD BE RESERVED FOR THOSE PATIENTS WHO CANNOT TOLERATE OR REFUSE TO TAKE LIQUID OR EFFERESCENT POTASSIUM PREPARATIONS OR FOR PATIENTS IN WHOM THERE IS A PROBLEM OF COMPLIANCE WITH THESE PREPARATIONS.

1. For therapeutic use in patients with hypokalemia with or without metabolic alkalosis, in digitalis intoxication and in patients with hypokalemic familial periodic paralysis.
2. For the prevention of potassium depletion when the dietary intake is inadequate in the following conditions: Patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis with ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, and with certain diarrheal states.
3. The use of potassium salts in patients receiving diuretics for uncomplicated essential hypertension is often unnecessary when such patients have a normal dietary pattern. Serum potassium should be checked periodically, however, and if hypokalemia occurs, dietary supplementation with potassium-containing foods may be adequate to control milder cases. In more severe cases supplementation with potassium salts may be indicated.

CONTRAINDICATIONS: Potassium supplements are contraindicated in patients with hyperkalemia since a further increase in serum potassium concentration in such patients can produce cardiac arrest. Hyperkalemia may complicate any of the following conditions: Chronic renal failure, systemic acidosis such as diabetic acidosis, acute dehydration, extensive tissue breakdown as in severe burns, adrenal insufficiency, or the administration of a potassium-sparing diuretic (e.g., spironolactone, triamterene).

Wax-matrix potassium chloride preparations have produced esophageal ulceration in certain cardiac patients with esophageal compression due to enlarged left atrium.

All solid dosage forms of potassium chloride supplements are contraindicated in any patient in whom there is cause for arrest or delay in tablet passage through the gastrointestinal tract. In these instances, potassium supplementation should be with a liquid preparation.

WARNINGS: Hyperkalemia—In patients with impaired mechanisms for excreting potassium, the administration of potassium salts can produce hyperkalemia and cardiac arrest. This occurs most commonly in patients given potassium by the intravenous route but may also occur in patients given potassium orally. Potentially fatal hyperkalemia can develop rapidly and be asymptomatic. The use of potassium salts in patients with chronic renal disease, or any other condition which impairs potassium excretion, requires particularly careful monitoring of the serum potassium concentration and appropriate dosage adjustment.

Interaction with Potassium-Sparing Diuretics—Hypokalemia should not be treated by the concomitant administration of potassium salts and a potassium-sparing diuretic (e.g., spironolactone or triamterene) since the simultaneous administration of these agents can produce severe hyperkalemia.

Gastrointestinal Lesions—Potassium chloride tablets have produced stenotic and/or ulcerative lesions of the small bowel and deaths. These lesions are caused by a high localized concentration of potassium ion in the region of a rapidly dissolving tablet, which injures the bowel wall and thereby produces obstruction, hemorrhage or perforation.

K-DUR tablets contain micro-crystalloids which disperse upon disintegration of the tablet. These micro-crystalloids are formulated to provide a controlled release of potassium chloride. The dispersibility of the micro-crystalloids and the controlled release of ions from them are intended to minimize the possibility of a high local concentration near the gastrointestinal mucosa and the ability of the KCl to cause stenosis or ulceration. Other means of accomplishing this (e.g., incorporation of potassium chloride into a wax matrix) have reduced the frequency of such lesions to less than one per 100,000 patient years (compared to 40–50 per 100,000 patient years with enteric-coated potassium chloride) but have not eliminated them. The frequency of GI lesions with K-DUR tablets is, at present, unknown. K-DUR tablets should be discontinued immediately and the possibility of bowel obstruction or perforation considered if severe vomiting, abdominal pain, distention, or gastrointestinal bleeding occurs.

Metabolic Acidosis—Hypokalemia in patients with metabolic acidosis should be treated with an alkalinizing potassium salt such as potassium bicarbonate, potassium citrate, potassium acetate, or potassium gluconate.

PRECAUTIONS: The diagnosis of potassium depletion is ordinarily made by demonstrating hypokalemia in a patient with a clinical history suggesting some cause for potassium depletion. In interpreting the serum potassium level, the physician should bear in mind that acute alkalosis per se can produce hypokalemia in the absence of a deficit in total body potassium while acute acidosis per se can increase the serum potassium concentration into the normal range even in the presence of a reduced total body potassium. The treatment of potassium depletion, particularly in the presence of cardiac disease, renal disease, or acidosis requires careful attention to acid-base balance and appropriate monitoring of serum electrolytes, the electrocardiogram, and the clinical status of the patient.

Laboratory Tests: Regular serum potassium determinations are recommended. In addition, during the treatment of potassium depletion, careful attention should be paid to acid-base balance, other serum electrolyte levels, the electrocardiogram, and the clinical status of the patient, particularly in the presence of cardiac disease, renal disease, or acidosis.

Drug Interactions: Potassium-sparing diuretics; see **WARNINGS**.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term carcinogenicity studies in animals have not been performed.

Pregnancy Category C: Animal reproduction studies have not been conducted with K-DUR. It is also not known whether K-DUR can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. K-DUR should be given to a pregnant woman only if clearly needed.

Nursing Mothers: The normal potassium ion content of human milk is about 13 mEq per liter. Since oral potassium becomes part of the body potassium pool, so long as body potassium is not excessive, the contribution of potassium chloride supplementation should have little or no effect on the level in human milk.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS: One of the most severe adverse effects is hyperkalemia (see **CONTRAINDICATIONS**, **WARNINGS**, and **OVERDOSAGE**). There have also been reports of upper and lower gastrointestinal conditions including obstruction, bleeding, ulceration, and perforation (see **CONTRAINDICATIONS** and **WARNINGS**); other factors known to be associated with such conditions were present in many of these patients.

The most common adverse reactions to oral potassium salts are nausea, vomiting, abdominal discomfort, and diarrhea. These symptoms are due to irritation of the gastrointestinal tract and are best managed by taking the dose with meals or reducing the dose.

Skin rash has been reported rarely.

OVERDOSAGE: The administration of oral potassium salts to persons with normal excretory mechanisms for potassium rarely causes serious hyperkalemia. However, if excretory mechanisms are impaired or if potassium is administered too rapidly intravenously, potentially fatal hyperkalemia can result (see **CONTRAINDICATIONS** and **WARNINGS**). It is important to recognize that hyperkalemia is usually asymptomatic and may be manifested only by an increased serum potassium concentration and characteristic electrocardiographic changes (peaking of T-waves, loss of P-waves, depression of S-T segment, and prolongation of the QT-interval). Late manifestations include muscle-paralysis and cardiovascular collapse from cardiac arrest.

Treatment measures for hyperkalemia include the following:

1. Elimination of foods and medications containing potassium and of potassium-sparing diuretics.
 2. Intravenous administration of 300 to 500 ml/hr of 10% dextrose solution containing 10–20 units of insulin per 1,000 ml.
 3. Correction of acidosis, if present, with intravenous sodium bicarbonate.
 4. Use of exchange resins, hemodialysis, or peritoneal dialysis.
- In treating hyperkalemia, it should be recalled that in patients who have been stabilized on digitalis, too rapid a lowering of the serum potassium concentration can produce digitalis toxicity.

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Adenocarcinoma of the Prostate

*J. Walt Stallings, M.D., William E. Atkinson, M.D., W. Ducote Haynes, M.D., Dean Kumpuris, M.D., Jerry L. Prather, M.D., and William L. Trantum, M.D.**

Problem

A 70-year-old man presented to the Second Opinion Panel with a previous diagnosis of stage A2 adenocarcinoma of the prostate with Gleason's grade 2-2. He had been treated for Crohn's disease during the previous year and was being followed by a gastroenterologist.

The patient had been experiencing slowly advancing symptoms of prostatic obstruction, and a transurethral resection (TUR) was performed two months before the patient presented. The TUR specimen showed carcinoma in 6 of 25 chips. The x-rays of his skull, left hip, and right rib series showed no evidence of metastatic disease. His bone scan revealed suspicious areas at the base of the skull, the left hip and the right rib cage.

His treatment plan for the prostate cancer was radiation therapy, 6600 RADS in 33 fractions, or a radical prostatectomy. Before treatment was initiated, the patient presented for a discussion of his treatment options.

Pathology Review

Dr. Atkinson: A review of histopathology revealed adenocarcinoma of the prostate, Gleason's grade 2-2.

Diagnostic X-ray Evaluation

Dr. Prather: The bone scan taken one month earlier revealed abnormality in the left intertrochanteric area of the left hip. Total body scans should be done with added views of the hip area. Reconstructed tomographic images (SPECT) were recommended. X-rays taken 3 years earlier were reviewed and revealed no abnormality in the hip area. No other x-rays were available for review.

Urology Opinion

Dr. Stallings: There was a good chance that this patient had localized prostate disease, particularly in view of the low-grade histologic pattern of the tumor. There were two major concerns of the panel: (1) whether there was bone metastasis to the left intertrochanteric area of the hip, and (2) whether or not the patient had Crohn's disease. A repeat bone scan was recommended to rule out metastatic disease. In view of the past history of an appendectomy and the lack of histologic confirmation of Crohn's disease, additional evaluation should be made, especially if radiation therapy should be indicated.

Gastroenterology Opinion

Dr. Kumpuris: A small bowel enema was needed in an attempt to rule out inflammatory bowel disease. We would not recommend radiation therapy if the patient had Crohn's disease. If he had Crohn's disease, then treatment of the prostate cancer would depend upon the results of a repeat bone scan. The available x-rays showed a cecal defect which could have been either inflammation or tumor.

Radiotherapy Opinion

Dr. Haynes: The patient needed to have further evaluation to be certain that metastasis was not present in the left hip. If metastasis was present, then only a palliative approach utilizing hormone manipulation was necessary. If the repeat bone scan did not suggest metastatic disease, then the patient should have aggressive treatment to irradiate his primary prostate neoplasm. This could be done using radiation therapy or radical prostatectomy. Because of the findings suggesting inflammatory bowel disease, surgical treatment would be preferred.

*St. Vincent Infirmary Cancer Center, Two St. Vincent Circle, Little Rock, Arkansas 72205.

Medical Oncology Opinion

Dr. Trantum: Chemotherapy is used in the treatment of selected cases of prostate cancer; however, it is not indicated in this patient's stage A2, Gleason's grade 2-2, disease unless it is metastatic and no longer responsive to hormone therapy.

Consensus

The panel agreed that two steps should be taken before a treatment plan should be made: (1) identify the abnormal area in the left hip with a repeat bone scan, and (2) evaluate the patient's inflammatory bowel disease. If the repeat bone scan should confirm metastatic disease, only palliative therapy using hormonal manipulation would be needed.^{1,2} If the bone scan should be negative for metastatic disease, radical prostatectomy as the primary treatment would be recommended.³

Follow-up

One month following discussion with the Second Opinion Panel, the patient's physician scheduled an exploratory laparotomy, which revealed carcinoid tumor of the cecum which had already metastasized to the liver. Because of this finding, radical prostatectomy was not performed.

Acknowledgment

The authors wish to thank Marjorie McMinn for her editorial assistance in the preparation of this paper.

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- Severe pain, dizziness, fainting, sweating, nausea or shortness of breath may also occur.

Actions

- Recognize the heart attack "signals".
- Stop activity and sit or lie down.
- Act at once if pain lasts for two minutes or more. Call the emergency medical service, or have someone take you to the nearest hospital emergency room.



American Heart Association

FROM OTHER YEARS

Mr. Terry's Bill to Place Surgical Instruments Upon the Free List

*Journal of the Arkansas Medical Society, Vol 3, No. 6
December 1892 p. 260.*

On December 9th, Mr. Terry, of Arkansas, introduced the following: A bill to put surgical instruments upon the free list.

"Be it enacted by the Senate and House of Representatives of the United State of America, in Congress assembled,

"That surgical instruments be, and the same are hereby, put upon the free list, and shall hereafter be admitted free of all duties."

The bill was referred to the Committee on Ways and Means, and ordered to be printed.

It is a source of congratulation to the members of the Arkansas Medical Society that the first step towards putting instruments upon the free list should result from their direct efforts.

President Dibrell forcibly urged the matter at the Hot Springs meeting, at which time a memorial to that effect was adopted. The question was again agitated at the last session, when another memorial to Congress was adopted.

If the bill fails to pass the present Congress, there is slight cause for doubting that it will surely be incorporated in the general tariff bill to be passed by the newly elected National assembly.

Mr. Terry is not only entitled to the thanks of every member of the medical profession in his own State, which he will surely receive, but the more than 100,000 physicians of the United States will gladly join in the praise that is justly due him.

News Items

*Journal of the Arkansas Medical Society, Vol. 1, No. 5
October 1904 p. 2-3*

Dr. C. E. Wright, of Pike City, is a candidate for penitentiary physician.

Dr. W. L. Purifoy has been appointed as local surgeon for the Iron Mountain Railroad at El Dorado.

Dr. S. S. Baker, of White, Ark., was injured in a recent wreck on the I. M. R. R. Extent of injuries not given.

Dr. H. R. Webster has been appointed local physician and surgeon for the Kansas City Southern Railway Company at Texarkana.

Last week at Swifton a jury gave a verdict in favor of Dr. T. W. Toler against the Iron Mountain Railroad for \$35 for the killing of a bird dog.

Dr. M. C. Burkett, living a short distance from Little Rock, was arrested September 9 by Chief of Police Pratt upon a charge of riot. It is alleged that he intentionally drove his buggy into the buggy of R. L. Mitchell, smashing the latter's vehicle.

From the University of Arkansas for Medical Sciences Library, History of Medicine/Archives Division.

THINGS TO COME

MARCH 13 - 18

Tenth Anniversary Winter Psychiatry Conference
"Treatment Issues: New Challenges, New Directions." Sponsored by the Menninger Foundation.
Yarrow Hotel and Conference Center, Park City, Utah.
Twenty-eight hours of Category I credit. Fees: Physicians, \$365 after February 1. Residents, \$240 after February 1. Further information: Brenda Vink, Conference Coordinator, The Menninger Foundation, Box 829, Topeka, KS 66601; (913) 273-7500, ext., 5991.

FEBRUARY 5-8

Terminal Care: Consultations on Clinical and Policy Problems. Sponsored by Center for Biomedical Ethics and Case Western Reserve University School of Medicine. Mariner's Inn, Hilton Head, South Carolina. Twenty-three and a half Category I credit hours. Registration fee: \$175. Further information: Penny B. Weingarten, Program Coordinator, Concern for Dying, 250 West 57th Street, New York, NY; 1 (800) 248-2122.



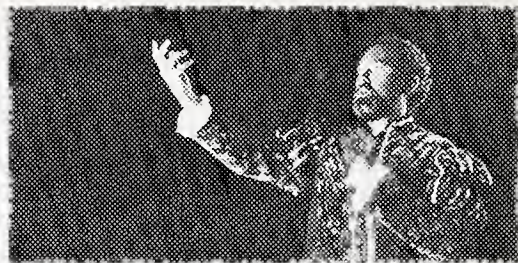
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Cholesterol: Current Concepts for Physicians

Self-Study Course for Physicians. Sponsored by the National Health, Lung and Blood Institute. A national cholesterol education program is available through the Arkansas Medical Society office in which a physician studies at home. Two hours Category I credit. Further information: David Wroten, Arkansas Medical Society, P. O. Box 5776, Little Rock, AR 72215; (501) 224-8967.

Beta Blockers vs. Calcium Channel Blockers

February 23, 12:30 p.m. Presented by Charles Marsh, Pharm D. Sponsored by AHEC - Fort Smith. Sparks Regional Medical Center, Medical Library. One Category I credit hour.

Pulmonary Embolism

February 27-28, time to be announced. Presented by Glenn V. Dalrymple, M.D., and Ernest J. Ferris, M.D. Sponsored by UAMS Office of Continuing Education for Physicians. University of Arkansas for Medical Sciences Education Building, Room G141A/B. Fees to be announced.

Malignant Melanoma - An Epidemic?

March 5, 8:30 a.m. - 12:30 p.m. Presented by G. Thomas Jansen, M.D. Sponsored by St. Vincent Cancer Center. St. Vincent Infirmary Medical Center, Vincent de Paul Room. Three Category I credit hours.

Fourth Annual Imaging Conference

March 5, 8:20 p.m. - 3:45 p.m. Sponsored by St. Vincent Infirmary Medical Center and Radiology Associates, P.A. Little Rock Hilton Inn. For further information contact Roberta A. Monson, M.D., St. Vincent Infirmary, 660-3000.

Malignant Melanoma - An Epidemic?

March 5, 8:30 a.m. - 12:00 noon. Presented by G. Thomas Jansen, M.D. Sponsored by St. Vincent Medical Center. St. Vincent Medical Center, Little Rock. Three Category I credit hours.

Guidelines to Treating Patients over the Phone

March 16, 12:30 p.m. Presented by Wendell Ross, M.D. Sponsored by AHEC - Fort Smith. Sparks

Regional Medical Center, Medical Library, Fort Smith. One Category I credit hour.

Aortiliac Occlusive Disease, Patient Management

March 17, 12:30 p.m. Presented by Donald Patrick, M.D. Sponsored by AHEC - Fort Smith. Sparks Regional Medical Center, Medical Library, Fort Smith. One Category I credit hour.

Weight Loss Diets

March 22, 12:30 p.m. Presented by Ginger Ogle, R.D. Sponsored by AHEC - Fort Smith. Sparks Regional Medical Center, 7th Floor Dining Room. One Category I credit hour.

Emergency Medicine Update

March 24 - 25. Sponsored by Baptist Medical Center. Little Rock Hilton. For further information contact Baptist Medical Center - Continuing Education.

Anesthesiology Update

March 26, 8:00 a.m. - 4:00 p.m. Presented by Richard B. Clark, M.D. Sponsored by UAMS. University Conference Center, Little Rock. Four and three-quarters Category I credit hours. Fee: no charge for Arkansas Society of Anesthesiologists; non-members, \$40.00; CRNA's, \$20.00.

Diabetic Diets

March 30, 12:30 p.m. Presented by Ginger Ogle, R.D. Sponsored by AHEC - Fort Smith. Sparks Regional Medical Center, 7th Floor Dining Room, Fort Smith. One Category I credit hour.

Twenty-third Annual Surgical Symposium

March 31 - April 2, time to be announced. Presented by Robert W. Barnes, M.D. Sponsored by the University of Arkansas College of Medicine. Arlington Hotel, Hot Springs, AR. Approximately 7 Category I credit hours. Fee: ACS members, \$25; non-ACS members, \$75; UAMS faculty and residents, \$25.

Symposium on Critical Care Medicine

April 6-9, 7:45 a.m. - 11:15 a.m. Presented by Glen F. Baker, M.D. and Milton D. Deneke, M.D. Sponsored by UAMS and the University of Tennessee, Memphis, College of Medicine. Arlington Hotel, Hot Springs. Nine Category I credit hours. Fee: \$150.

Recurring Education Programs

EL DORADO - AHEC

Behavioral Sciences Conference, first and fourth Friday, 12:15 p.m., AHEC - South Arkansas.
Chest Conference, third Wednesday, 12:30 p.m., Warner Brown Hospital
Fracture Conference, third Tuesday, 12:15 p.m., AHEC-South Arkansas
Gynecology-Pathology Conference, second Friday, 12:15 p.m., AHEC-South Arkansas
Internal Medicine Conference, first, second and fourth Wednesday, 12:15 p.m., AHEC-South Arkansas
Pathology Conference, second Tuesday, 12:15 p.m., AHEC-South Arkansas
Obstetrics-Gynecology Conference, fourth Thursday, 12:15 p.m., AHEC-South Arkansas
Surgical Conference, first, second and third Monday, 12:15 p.m., AHEC-South Arkansas
Tumor Clinic, fourth Tuesday, 12:15 p.m., AHEC-South Arkansas

FAYETTEVILLE - AHEC NORTHWEST

City Hospital Staff Meeting, second Friday, 12:00 noon, Fayetteville City Hospital
Medicine Teaching Conference, first, third and fifth Thursday, 1:00 p.m., AHEC - NW, 241 W. Spring, Fayetteville
Nephrology Lecture Series, fourth Thursday, 12:30 p.m., AHEC- NW, 241 W. Spring, Fayetteville
Rheumatology Lecture Series, first Tuesday, 12:30 p.m., VA Medical Center.
St. Mary's Saturday Morning Problem Conference, each Saturday, 8:30 a.m., St. Mary's Rogers Hospital, Rogers, AR.

FAYETTEVILLE - VA MEDICAL CENTER

Medical Conference (varying topics), each Wednesday, 12:15 p.m., Conference Room, Building 1
Pathology/Mortality Conference, each Friday, 12:30 p.m., Conference Room, Building 1

FORT SMITH-AHEC

Cardiology Conference, first Wednesday, 12:30 noon, Sparks Regional Medical Center, 4th Floor Conference Room
Neurology Conference, second Thursday, 12:30 noon, Sparks Regional Medical Center, Medical Library

HOT SPRINGS-AMI NATIONAL PARK MEDICAL CENTER

Continuing Medical Education Luncheon for Medical/Dental Staff, varying topics, second and fourth Friday, 12:30 p.m., Classrooms, AMI National Park Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, first and third Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Annex Building
Arkansas Methodist Hospital CME Conference, last Friday, 7:00 a.m., Arkansas Methodist Hospital, Paragould
Cherokee Village Tumor Conference, third Monday, every four months, 6:00 p.m., Ozark Baptist Memorial Hospital, Cherokee Village.
Chest Conference, fourth Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room
Independence County Medical Society, second Tuesday, 7:30 p.m., White River Medical Center, Batesville
Interesting Case Conference, second and fifth Tuesday, when applicable, 12:00 noon, St. Bernard's Dietary Conference Room
Kennett Tumor Conference, second Tuesday (every other month), 12:00 noon, Twin Rivers Regional Medical Center, Kennett, MO
Methodist Hospital of Jonesboro CME Staff Conference, second Tuesday, 7:30 p.m., Cafeteria, Methodist Hospital of Jonesboro
Monthly Medical Lecture Series, third Tuesday, 7:30 p.m., rotates each month between Walnut Ridge and Pocahontas
Neuroradiology Conference, second Friday, 12:00 noon, St. Bernard's Dietary Conference Room.
Newport Tumor Conference, second Wednesday, 12:00 noon, rotates each month between Harris Clinic and Newport Hospital
Perinatal Conference, second Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Piggott Tumor Conference, third Wednesday, 12:00 noon, Piggott Hospital, every four months.
Poplar Bluff Tumor Conference, third Wednesday, 12:00 noon, Lucy Lee Hospital, Poplar Bluff.
Tumor Conference, fourth Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Wynne Tumor Conference, third Monday, 6:00 p.m., Grecian Steak House, Wynne, every four months.

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Alternating Sub-Specialty Conference, third Wednesday, 12:00 noon, Second Floor Classroom
General Pediatrics Seminar, first and third Friday, 12:00 noon, Second Floor Classroom
Genetics Conference, each Wednesday, 12:00 noon, Sturgis Building, Room 457
Infectious Disease Conference, second Wednesday, 12:00 noon, Sturgis Building, Room 121
Metabolic Neurology Conference, first Wednesday, 1:00 p.m., Polly R. Thomas Conference Room
Pediatric Grand Rounds, each Tuesday, 8:00 a.m., Sturgis Building, Auditorium
Pediatric Neuropsychiatry Conference, second Wednesday, 1:30 p.m., Polly R. Thomas Conference Room
Pediatric Neuroscience Conference, first Thursday, 8:00 a.m., Second Floor Classroom
Pediatric Pathology Conference, first Wednesday, 12:00 noon, Second Floor Classroom
Pediatric Pharmacology Conference, fifth Wednesday when applicable, 12:00 noon, Second Floor Classroom
Pediatric Radiology Conference, first and third Thursday, 12:00 noon, Second Floor Classroom
Pediatric Research Conference, third Monday, 12:00 noon, Sturgis Building, Rooms S120-121
Problem Case Conference, second and fourth Friday, 12:00 noon, Second Floor Classroom

LITTLE ROCK-ST. VINCENT INFIRMARY

Cancer Conference, first Wednesday, 12:00 noon, CARTI Auditorium. A meal is provided.
Cancer Conference, third and fourth Thursday, 12:00 noon, Room S1174K, Lab. A meal is provided.

General Medicine Journal Club, each Tuesday, 12:00 noon, Medical Affairs Conference Room. Bring your lunch.
Hematology-Oncology Conference, second Thursday, 12:00 noon, Laboratory Library. A meal is provided.
Interhospital Urology Grand Rounds, first Tuesday, 5:30 p.m., Maumelle Room. Refreshments are provided.
Neuropathology Conference, third Tuesday, 5:00 p.m., Room S1174K, Laboratory. Refreshments are provided.
Pediatric Conference, first Tuesday, 12:30 p.m., Maumelle Room. A meal is provided.
Peripheral Vascular Disease Conference, fourth Tuesday, 6:00 p.m., Maumelle Room. A meal is provided.
Pulmonary Conference, second and fourth Wednesday, 12:00 noon, DeSoto Room. A meal is provided.

LITTLE ROCK-UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

ACRC/CARTI Tumor Conference, each Wednesday, 12:00 noon, CARTI, Markham & University
ACRC Oncology Forum, fourth Thursday, 4:00 p.m., UAMS Education Building, Room G137
Anesthesia Conference Series, each Wednesday, 4:00 p.m., UAMS Education Building, Room G/110 A&B
Anesthesia Morbidity and Mortality Conference, days vary, UAMS Education Building, Room G/110 A&B
Interdisciplinary Gynecologic Cancer Conference, each Friday, 12:30 p.m., UAMS Education Building, Room G106 A&B
Medicine Grand Rounds, each Thursday, 12:15 p.m., UAMS Shorey Auditorium
Medicine Research Conference, each Wednesday, 4:30 p.m. Shorey Building, Room 3506
Neurology Clinical Case Conference, three Thursdays per month, 8:00 a.m. Rotates between UAMS (7D33) and LRVAMC (3S) and ACH.
Neuropathology Conference, every Tuesday, 4:00 p.m. Rotates between UAMS (Shorey Building, 4th floor) and LRVAMC (Autopsy Room).
Neuroscience Conference (Basic), second, third, and fourth Monday, 8:00 a.m., UAMS 7D33.
Ob/Gyn Grand Rounds, each Wednesday, 7:30 a.m., UAMS Education Building, Room G/131B
Ophthalmology Problem Case Conference, each Thursday, 4:00 p.m., UAMS AAC Eye Clinic, Room 3/150.
Orthopaedic Bibliography Conference, each Tuesday, 8:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Fracture Conference, each Tuesday, 7:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Grand Rounds, each Tuesday, 10:00 a.m., UAMS Education Building, Room B/135
Psychiatry Grand Rounds/Clinical Case Conference, each Friday, 11:00 a.m., UAMS Shorey Auditorium
St. Vincent Urology Grand Rounds, first Tuesday, 5:30 p.m., St. Vincent Infirmary, Education Building, Room 159
Surgery Grand Rounds, each Monday, 5:00 p.m., UAMS Education Building, Room G/141A
Surgery Morbidity and Mortality Conference, each Wednesday, 5:00 p.m., UAMS Education Building, Room G/131A.
Surgery Review Conference, each Monday, 6:00 p.m., UAMS Education Building, Room G/141A
Urologic Topics (Resident Presentation), once or twice monthly, 5:00 p.m., UAMS
Urology Grand Rounds, twice monthly, 5:00 p.m., VAMC
Urology Morbidity and Mortality Workshop, last Wednesday, 5:00 p.m., UAMS
Uro-Radiology Workshop (Urologic Imaging), first Thursday, 5:00 p.m., UAMS
VA Medical Service Teaching Conference, each Thursday, 8:00 a.m., VAMC, Room 2D109
VA Physical Medicine and Rehab Grand Rounds, fourth Friday, 11:00 a.m., NLRVA Building 89, Conference Room, or Arkansas Rehab Institute
VA Surgery Grand Rounds, each Thursday, 12:45 p.m., VAMC, Room 2D109
VA Topics in Rehabilitation Medicine, each Thursday, 7:45 a.m., NLRVA Conference Room, Building 89L
VA Weekly Cancer Conference, each Tuesday, 1:00 p.m., VAMC, Room 2D109

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, third Thursday, 7:00 a.m., Conference Room 1
Grand Rounds Conference, each Wednesday, 12:00 noon, Conference Room 1. Lectures and Case Presentations. A light lunch will be served
Pathology Conference, third Tuesday, 3:00 p.m., Pathology Library. Case Presentations.
Pulmonary Conference, each Tuesday, 12:00 noon, Shuffield Auditorium. A light lunch will be served.
Surgery Conference, each Thursday, 7:30 a.m., Shuffield Auditorium. Lectures and Case Presentations.

PINE BLUFF-AHEC

Behavioral Science Conference, each Thursday, 12:30 p.m., Jefferson Regional Medical Center
Chest Conference, second and fourth Friday, 12:30 p.m., Jefferson Regional Medical Center
Family Practice Conference, fourth Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Internal Medicine Conference, second and fourth Wednesday, 12:30 p.m., Jefferson Regional Medical Center
Obstetrics/Gynecology Conference, second Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Pediatric Conference, third Wednesday, 12:30 p.m., Jefferson Regional Medical Center
Radiology Conference, third Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Southeast Arkansas Medical Lecture Series, third Tuesday, 6:30 p.m., Rosswood County Club. Dinner meeting.
Sub-Specialty Conference, first Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Surgery Conference, first Wednesday, 12:30 p.m., Jefferson Regional Medical Center

TEXARKANA-AHEC

Chest Conference, third Wednesday, 12:30 p.m., St. Michael Hospital
Tumor Conference, first Wednesday, 7:00 a.m., St. Michael Hospital

As organizations accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the organizations named certify that these continuing medical education activities meet the criteria for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

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Liability Dispute Settlement System Proposed by AMA

An entirely new way of resolving medical liability disputes was proposed by the AMA and 32 national medical specialty societies at recent Washington, D.C., press conference. The proposal calls for the establishment of a fault-based administrative system patterned along the lines which presently exist for equitable resolution of worker's compensation claims and labor disputes. The federal government will put a similar plan into effect this year as an alternative way for dealing with vaccine compensation injuries.

The proposed system, a product of the AMA/Specialty Society Medical Liability Project, would be administered by substantially expanded state medical boards or other state agencies. The fault-based system would result in fairer and faster resolution of claims, according to James S. Todd, M.D., Senior Deputy Executive Vice President of the AMA and lead spokesman for the project.

The approach envisioned ultimately would supplant the existing court jury system, but presently is being offered only as an alternative to the tort system. The first step is to push for implementation of the fault-based administrative system in one and, preferably several, states on an experimental basis. Several state medical associations have expressed interest in exploring the merits of putting the system into effect in their states.

The plan emerged from combined efforts of 32 national medical specialty societies and the AMA. The AMA/Specialty Society Medical Liability Project was formed two years ago to pursue potential ways for attaining realistic solutions to the mounting professional liability crisis. The specialty societies have thus far contributed almost \$600,000 in the quest. "We have worked for over a year with a unique coalition of lawyers, physicians and public policy experts - inside and outside of organized medicine - to design what is above all a fair system - fair to the patient, the physicians and the public," Dr. Todd said. He added, "We believe that more patients injured by medical negligence will be compensated under this plan, but that fewer dollars will be spent on meritless claims and unnecessary transaction costs."

Access to free legal representation in every case where initial review determines that an injury may have been caused by medical negligence is one of the most important patient benefits which would be afforded by the new system. Another benefit is that legal standards would be modified to make it easier for patients to recover some compensation whenever there is evidence of medical negligence. There would be strong incentives for early settlement of meritorious claims.

State boards or other agencies empowered to direct the system would be given greater authority and more manpower to monitor physician performance. All health care entities would be required to conduct periodic physician performance credential reviews and to report any conclusion indicating that a physician's performance had been substandard. Insurers also would be required to report cancellations and failures to renew for reasons based on incompetence. A clearinghouse would be established for this purpose. "Linking the claims process with the medical board's separate disciplinary system will enable the board to over see more effectively physicians performance," Paul Nora, M.D., the Project's American College of Surgeons representative noted. It is thought that there would be an important societal benefit by the board and various health entities to enhance the quality of each physician's practice.

Arkansas Breast Screening Project

Approximately 350 Arkansas women die from breast cancer each year. The American Cancer Society and KARK-Channel 4 are co-sponsoring a comprehensive project this spring in an effort to lower that number.

The Arkansas Breast Screening Project will emphasize the need for early breast cancer detection among Arkansas women. The goal of the project is to save lives, according to Dr. Richard E. McKelvey, chairman of the project.

"This disease strikes one woman in 10 sometime during her lifetime," Dr. McKelvey said. "This represents an average of 1,100 Arkansas women annually. Many of the 350 women who die from breast cancer each year could have been saved with early detection." McKelvey added that the campaign will stress the life-saving benefits of mammography along with regular breast self-examinations and examinations by health care professionals as the best defense against breast cancer.

The project will begin with a massive educational effort by American Cancer Society certified breast self-examination instructors for women. An extensive media campaign during the months of March and April will follow, as local news professionals join in spreading the word about early breast cancer detection.

In April and May participating Arkansas hospitals and breast cancer screening centers will offer mammograms at a reduced rate for a limited time.

"We're extremely pleased that KARK-Channel 4 has agreed to co-sponsor this project," Dr. McKelvey said. "The television station will present a multi-part news report on breast cancer and early detection during the week of April 11th."

Dr. Nancy Synderman will be the spokesperson for the project and will announce on the air that breast screening packets with discount mammogram appointment information are available by calling the "Mammography Hotline."

Dr. McKelvey said that volunteers from Central Arkansas professional and civic organizations will staff the telephone bank in shifts throughout the week. They will be trained to answer calls, determine the caller's eligibility for mammograms and record information for packet mailings.

"I'm personally excited about this project - its time has come. We have the potential to significantly reduce deaths from this second most commonly diagnosed malignancy in women," he said.

Patient Care Procedures for Your Practice

Medical Economic Books has brought together a collection from Patient Care magazine's "Procedures for Your Practice" series. This "how-to" manual describes 38 of the most commonly performed procedures done in the primary care setting and also includes detailed line drawings.

The authors, Charles E. Driscoll, M.D., and Robert E. Rakel, M.D., provide clinical overviews of the problem, materials and equipment needed, indications and contraindications for treatment, potential complications and suggestions for follow-up care. The book covers practical information primary care physicians could use including the latest procedures on starting an IV line in an adult or a newborn, administering local anesthesia, doing a laryngoscopy, passing a urinary catheter, performing a circumcision or inserting an intrauterine device. A list of suggested readings at the end of each chapter provides additional sources of information.

The book is useful as a refresher for the practitioner wanting guidance on a specific technique and as a helpful overview for the resident or medical student attempting new techniques.

Patient Care Procedures for Your Practice is available from Medical Economics Books, Box C-779, Pratt Station, Brooklyn, NY 11205. For further information, or to request a review copy, write to Phyllis D. Gold, Director of Marketing, Medical Economics Books, Oradell, NJ 07649.

NEWSMAKERS

Les Anderson, M.D., a Lonoke family practitioner, presented a program on menopause and its effect on the lives of women today. The program was co-sponsored by CIBA Pharmaceutical Company, PEAK (Physicians Encouraging Awareness and Knowledge) and the Lonoke County Library.

The 1987 recipient of the Robert Shields Abernathy Award for excellence in internal medicine is **Dr. James S. Adamson**. Dr. Adamson has been in practice in Little Rock since 1974 and is a pulmonary disease specialist. The Abernathy Award has been given since 1973 in honor of Robert Shields Abernathy, who served as chairman of the Department of Medicine at the University of Arkansas for Medical Sciences for 10 years.

The Arkansas League of Polio Survivors (ALPS) has established an office in North Little Rock and **Henrik Madsen II, M.D.**, has been appointed medical director for the organization. The support group meets regularly on the last Saturday of the month at 1:30. The Arkansas League of Polio Survivors' office is located at 201 West Broadway. The business hours for the ALPS office are 8:00 a.m. to 4:30 p.m. and the telephone number is (501) 227-0758.

Dr. Richard Eisner, a Little Rock ophthalmologist, will be joining the staff of Southwest Hospital in Otter Creek Park. The hospital is scheduled to open in March, 1988. Dr. Eisner began designing eye surgery instruments two years ago and will incorporate his extensive knowledge of computers and lasers into his practice. Two other staff members are **Dr. Roy E. Harrison** and **Dr. John F. Riddle**. The two doctors are family practitioners in Little Rock and have been partners for 24 years.

The Democratic nomination for Coroner of Washington County is **Dr. David L. Rogers**, a Fayetteville family practitioner. Dr. Rogers is the current secretary-treasurer of the Washington County Medical Society. He has been practicing in Fayetteville for eight years.

Don G. Howard, M.D., a Fordyce family practitioner, recently passed the oral and written examination of the American Board of Quality Assurance and Utilization Review Physicians.

Dr. Walter P. Ashford, a Harrison internist, is seeking reelection as justice of the peace of District 2 and serve on the Boone County Quorum Court, subject to the Republican primary election.

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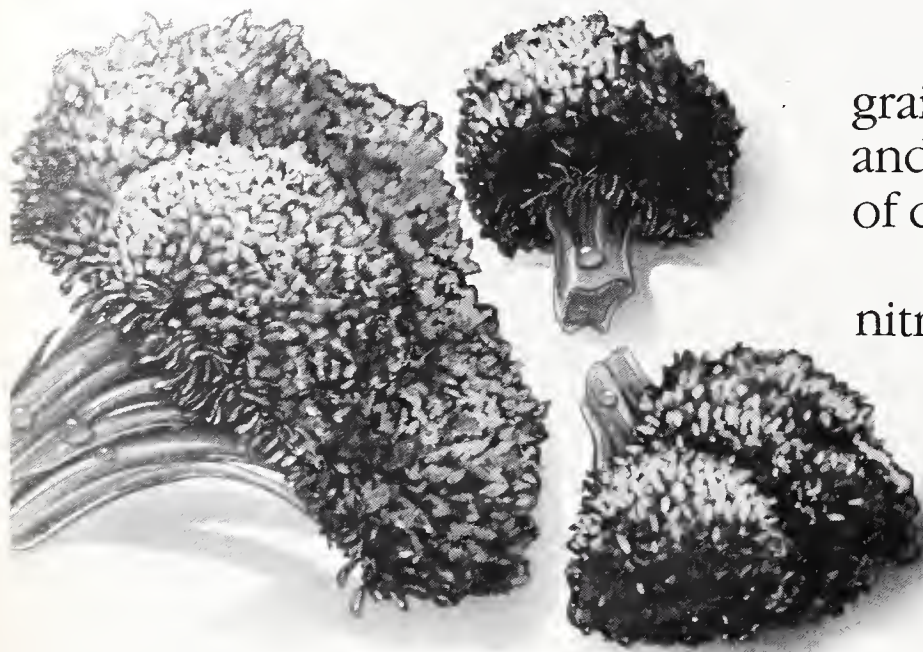
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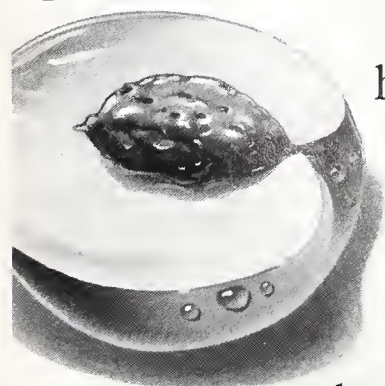
Fruits, vegetables, and whole-grain cereals such as oatmeal, bran and wheat may help lower the risk of colorectal cancer.

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Foods that may help reduce the risk of gastrointestinal and respiratory tract cancer are cabbage, broccoli, brussels sprouts, kohlrabi, cauliflower.

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Milam, Craig, Family Practice, Berryville. Born August 16, 1947, Conway. Pre-medical education, Hendrix College, B.S., 1969. Medical education, University of Arkansas for Medical Sciences, 1973. Internship, Baptist Medical Center (UAMS). Practice experience, Melbourne, AR, 12 years; Berryville, 2 years. Member, AAFP.

CRAIGHEAD-POINSETT COUNTY MEDICAL SOCIETY

Vines, Troy A., Family Practice, Jonesboro. Born November 5, 1953, Newport, AR. Pre-medical education, Arkansas State University and University of Arkansas for Medical Sciences School of Pharmacology, B.S., 1975. Medical education, UAMS, 1984. Residency, Area Health Education Center, Jonesboro. Teaching appointments, UAMS; AHEC-NE, Instructor, Residency program. Board certified.

Young, S. Morris, General Practice, Jonesboro. Born January 12, 1948, Hart County, KY. Pre-medical education, Austin Peay State University, B.A., 1969. Medical education, University of Tennessee, Memphis. Internship/Residency, University of Tennessee program. Practice experience, 2 years, Parkin, AR; 2 years, West Memphis, AR; 10 years; Jonesboro.

GARLAND COUNTY MEDICAL SOCIETY

Preston, Ross B., Rheumatology, Hot Springs. Born May 1, 1950, Bethesda, MD. Pre-medical education, Rhodes College, Memphis, TN, B.A., 1972. Medical education, University of Tennessee, 1976. Internship/Residency, University of Tennessee. Practice experience, Everest, WA, 5 years. Board certified, Internal Medicine and Rheumatology. Member, ACP, ARA.

JEFFERSON COUNTY MEDICAL SOCIETY

Duckworth, Thomas, Family Practice, Pine Bluff. Born October 15, 1958, Paragould. Pre-medical education University of Arkansas, B.S. Medical education, University of Arkansas for Medical Sciences, 1984. Internship and Residency, Area Health Education Center, Pine Bluff. Teaching appointments, clinical Instructor, UAMS. Member, AAFP, AMA. Board certified.

LITTLE RIVER COUNTY MEDICAL SOCIETY

Dalby, Robert D., Family Practice, Ashdown. Born October 16, 1952, Oklahoma City. Pre-medical educa-

tion, University of Central Arkansas, Conway, B.S., 1980. Medical education, University of Arkansas for Medical Sciences, 1984. Internship and Residency, University of Arkansas for Medical Sciences (AHEC - Pine Bluff). Board certified. Member, American Academy of Family Physicians.

OUACHITA COUNTY MEDICAL SOCIETY

Tyson, Samuel T., Internal Medicine, Camden. Born November 16, 1955, Camden. Pre-medical education, Hendrix College, B.A., 1978. Medical education, University of Arkansas for Medical Sciences, 1984. Internship/Residency, Texas Tech University, El Paso. Board eligible. Member, American Society of Internal Medicine.

PHILLIPS COUNTY MEDICAL SOCIETY

Robirds, David M., Internal Medicine, Helena. Born July 12, 1952, El Dorado. Pre-medical education, University of Arkansas, Fayetteville, B.A., 1974. Medical education, St. Louis University School of Medicine, 1978. Internship/Residency, University of Arkansas for Medical Sciences. Practice experience, Helena, 6 years. Board certified. Member, Renal Physician Association, ASIM and ACP.

SEBASTIAN COUNTY MEDICAL SOCIETY

Knubley, William A., Neurology, Fort Smith. Born June 16, 1954, St. Louis. Pre-medical education, University of Missouri, St. Louis, B.A., 1976. Medical education, University of Missouri, Columbia, 1980. Internship and Residency, University of Tennessee for Health Sciences. Teaching appointments, 2 years, University of Tennessee Center for Health Sciences. Board eligible. Member, American Academy of Neurology, Memphis Academy of Neurology.

WHITE COUNTY MEDICAL SOCIETY

Brown, Terry Mac (D.O.), General Osteopathy, Judsonia. Born November 2, 1951, Searcy. Pre-medical education, Arkansas Tech University, B.S., 1973. Medical education, Oklahoma College of Osteopathic Medicine, Tulsa, 1977. Internship, Community Hospital, Hollywood, FL. Practice experience, 6 years, Fairfield Bay, AR; 7 months, Big Pine, FL.

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Wait, Gerald M., General Surgery. Born May 26, 1954, Washington, D.C. Pre-medical education, University of Texas, Arlington, B.S., 1982. Medical school, University of Texas Health Sciences Center, Dallas, 1987.

DR. WILLIAM J. JONES

William J. Jones, M.D., age 69, died Monday, January 11, 1988. Dr. Jones resided in Glenwood.

Dr. Jones was a member of the Arkansas Medical Society as well as the Pike and Howard County Medical Societies. He established the Glenwood Nursing Home in 1966 and had served on the Glenwood School Board and the City Council.

Dr. Jones was a Navy veteran who served during World War II and a Mason. He was a Baptist.

Survivors are his wife, Ethelyn Jones; two sons, Billy and Jimmy Jones of Glenwood; two daughters, Mary Ann Tidwell of Glenwood and Janice Jones of Little Rock; a sister Sally Jane Lynch of Conway; seven grandchildren and a great-grandchild.

DR. EARLE D. McKELVEY

Dr. Earle D. McKelvey of Clarksville, formerly of Paragould, died Saturday, January 2, 1988. He was 84.

Dr. McKelvey began practice in 1938 in Paragould. He was on the original medical staff at Community Methodist Hospital, now Arkansas Methodist Hospital. The Arkansas Methodist Hospital Board honored Dr. McKelvey in 1974 for 25 years of service. In 1984, the Arkansas Medical Society honored Dr. McKelvey by making him a member of the Fifty Year Club and an Emeritus member, indicating 50 years of service to the medical profession.

Dr. McKelvey was a member of the state Board of Examiners from 1959 to 1972. He also served as a physician for the Civilian Conservation Corps camps in Arkansas from 1934 to 1938.

Dr. McKelvey is survived by his two sons, William Gilbert McKelvey of Knoxville, Tennessee, and Dr. Richard Earle McKelvey of Clarksville; a sister Helen Rogers of Detroit, Michigan, four grandchildren and two great-grandchildren.

DR. HAROLD H. SHORT

Dr. Harold H. Short, a family practitioner from Texarkana, died Thursday, January 7, 1988. He was 56.

Dr. Short was a member of the American Academy of Family Practitioners, Texas Medical Association, Arkansas Medical Society, and the Bowie and Miller County Medical Societies. He was also a member of the Texarkana Chamber of Commerce.

Dr. Short was one of the founders of the Glenwood Medical Clinic and became president of the clinic's board of directors.

Survivors are his wife, Irene Gould Short; two daughters, Carol Short of Texarkana and Cindy Paslay of Arlington, TX; his mother, Polly Short Tibbitt of Texarkana; a brother, Robert M. Short of Texarkana; and three sisters, Kathryn Harrison of Houston, TX, Linda Sebesta of Plano, TX and Sue Bosier of Linden, TX.



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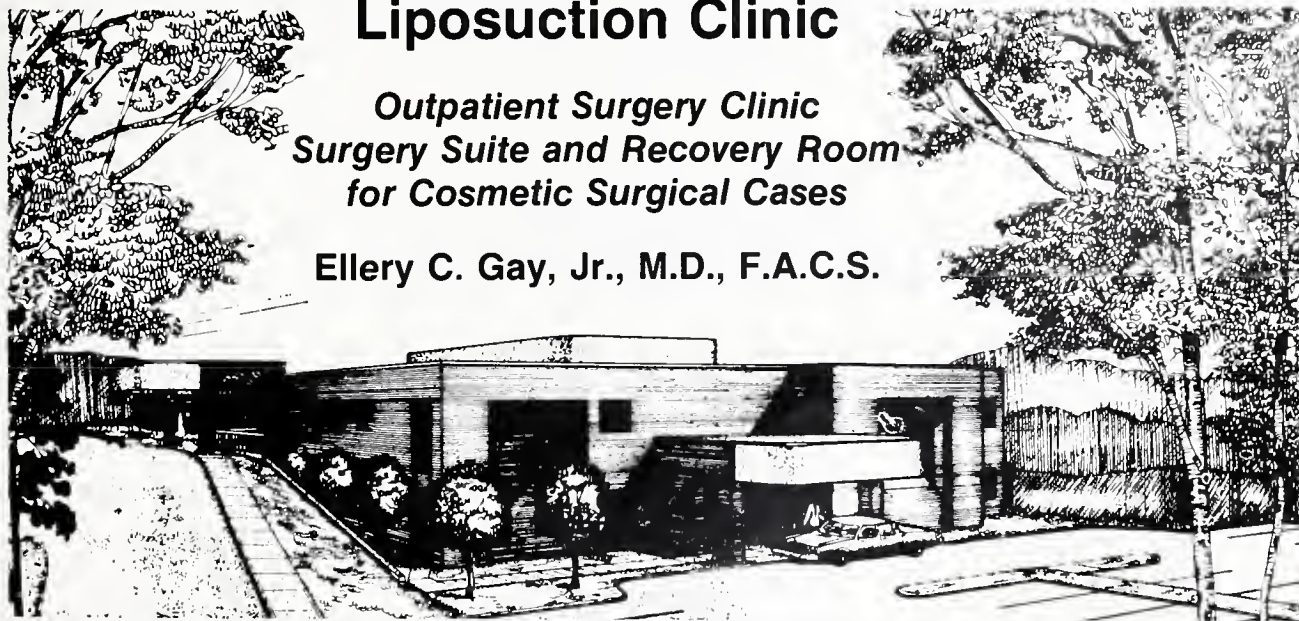
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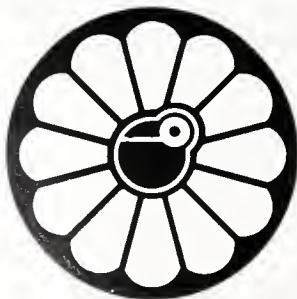
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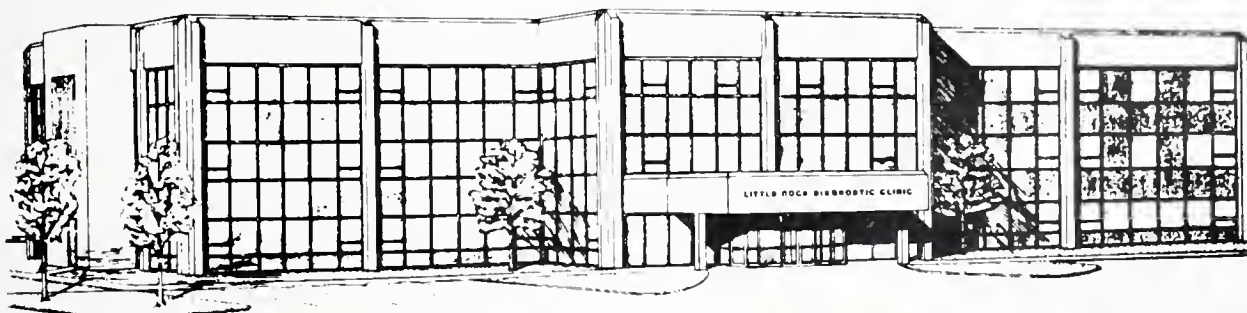
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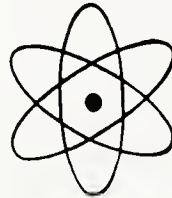
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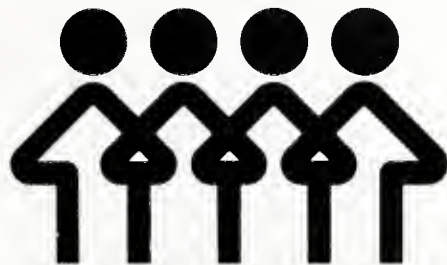
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Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use at this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving).

Usage in Pregnancy: Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy, advise patients to discuss therapy if they intend to or do become pregnant.

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage, withdrawal symptoms following discontinuation at either component alone have been reported (nausea, headache and malaise for amitriptyline, symptoms [including convulsions] similar to those at barbiturate withdrawal for chlordiazepoxide).

Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady state concentrations of the tricyclic drugs.

Concomitant use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration at ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects.

Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring

reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.

The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs.

Cardiovascular: Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke.

Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.

Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.

Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation at urinary tract.

Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.

Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.

Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.

Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion.

Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. IV administration at 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

Dosage: Individualize according to symptom severity and patient response. Reduce to smallest effective dosage when satisfactory response is obtained. Larger portion of daily dose may be taken at bedtime. Single h.s. dose may suffice for some patients. Lower dosages are recommended for the elderly. Limbitrol DS (double strength) Tablets, initial dosage at three or four tablets daily in divided doses, increased up to six tablets or decreased to two tablets daily as required. Limbitrol Tablets, initial dosage at three or four tablets daily in divided doses, for patients who do not tolerate higher doses.

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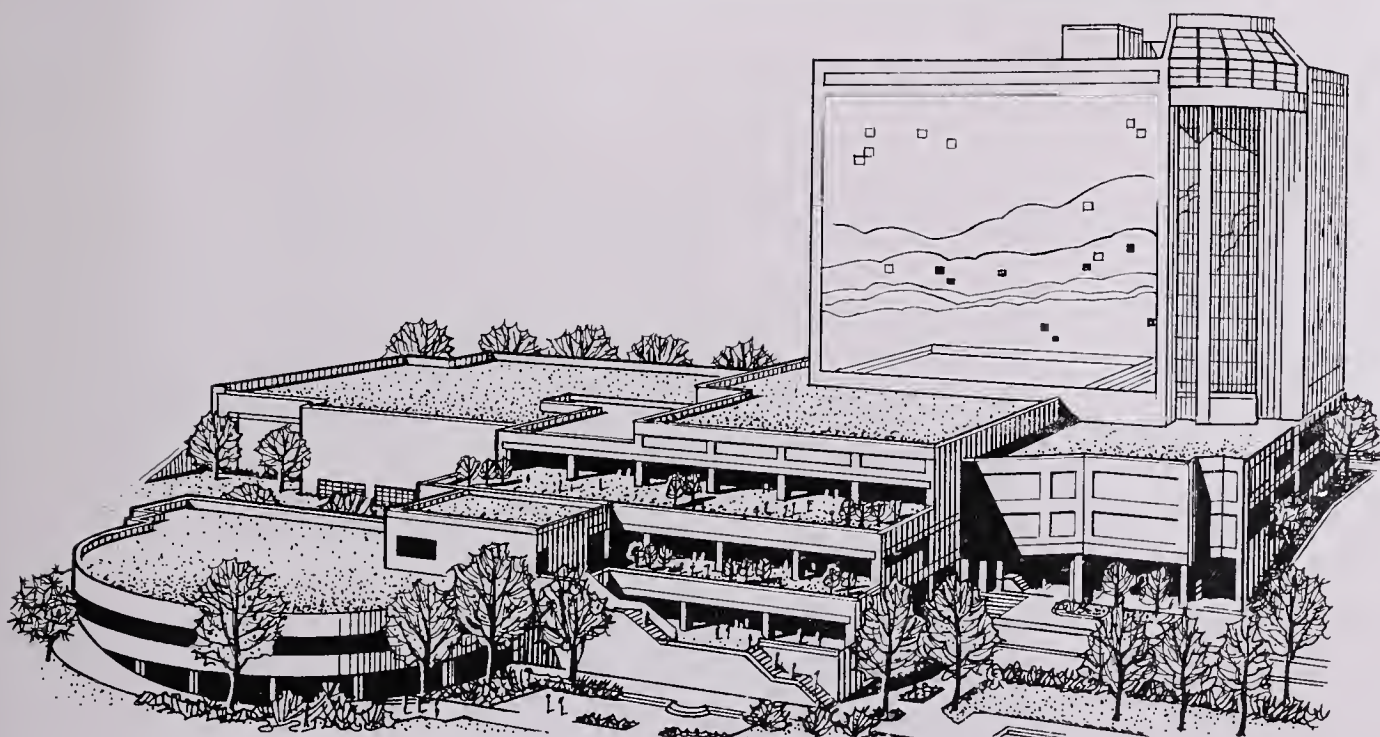
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Volume 84 Number 10

March, 1988

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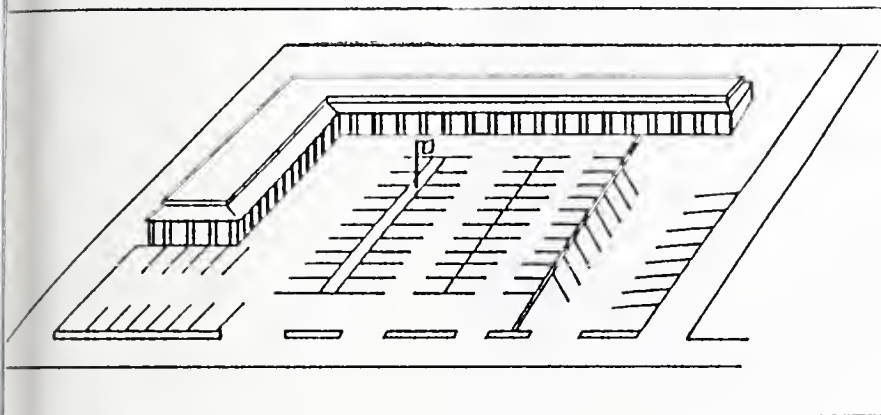


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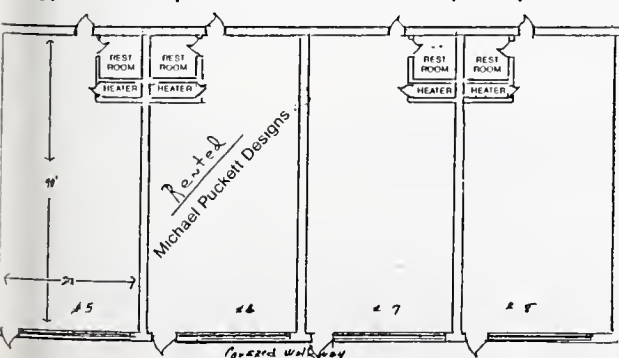
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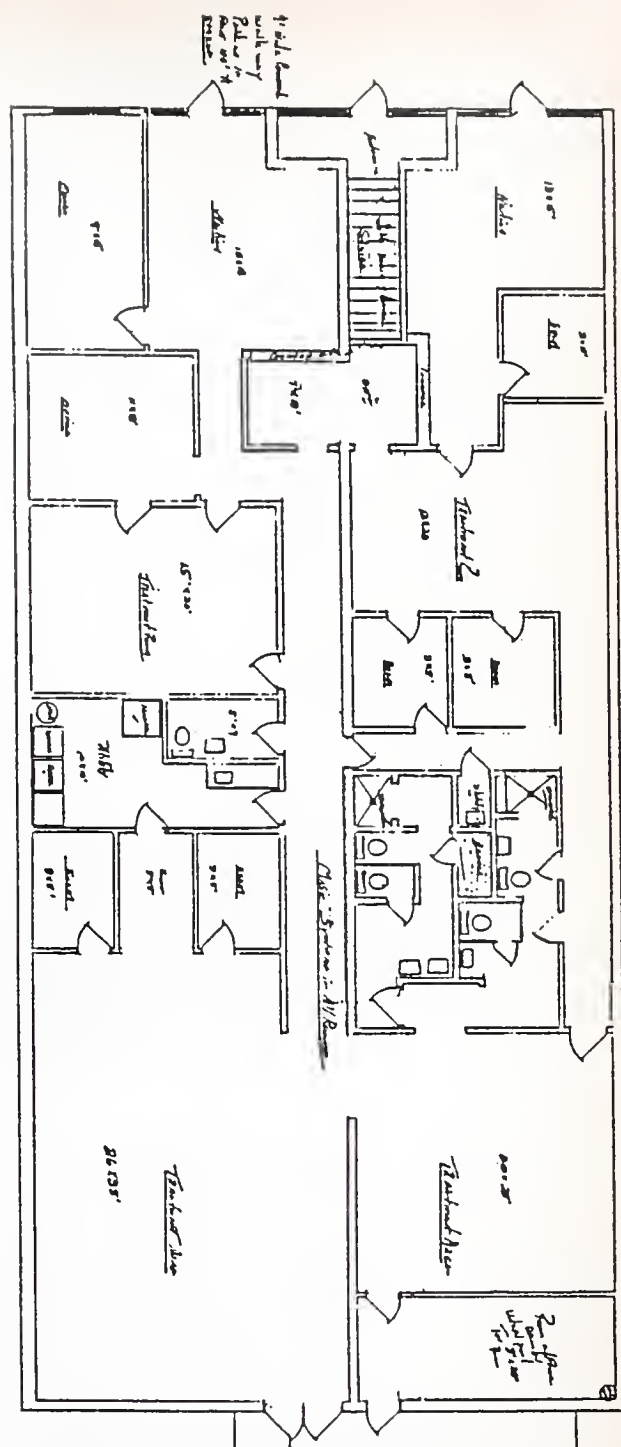
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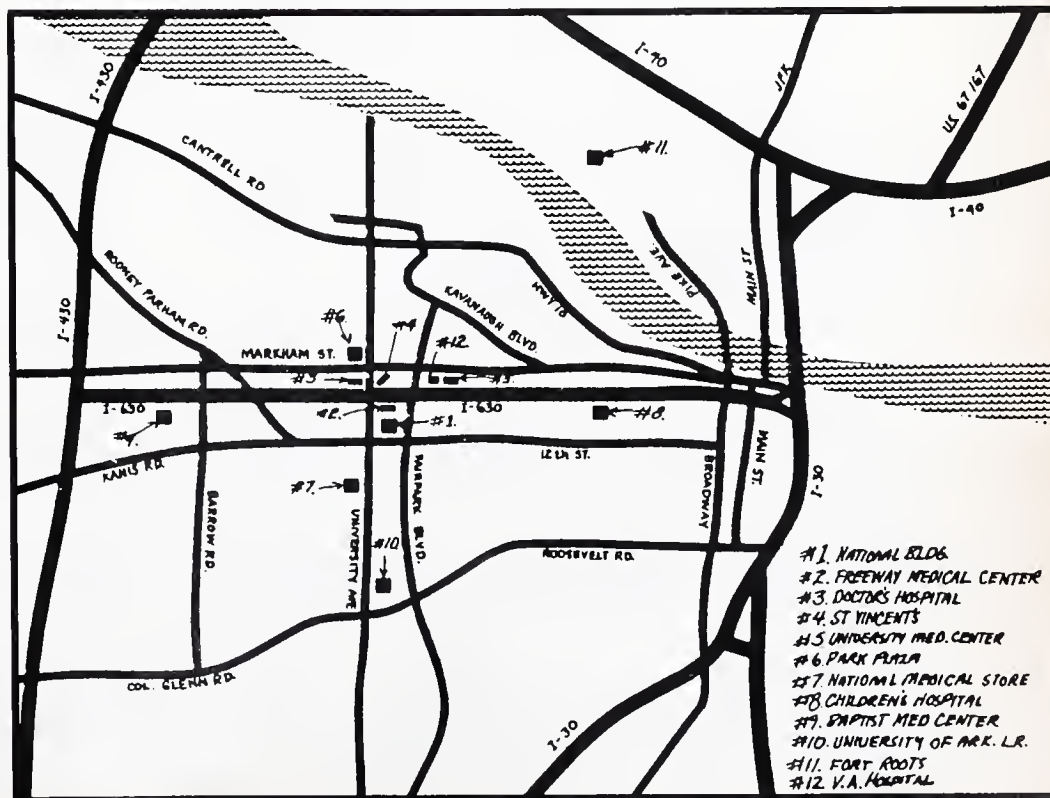
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Volume 84 Number 10

March 1988

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AIDS IN ARKANSAS 1988

January 1 - February 23, 1988

Total number of cases

reported	15
Number of deaths	4

CASES BY SEX

Male	14
Female	1

CASES BY RACE

White	9
Black	6

CASES BY RISK GROUP

Homosexual/Bisexual*	11
IV Drug User	0
Hemophiliac	0
Transfusion	2
Heterosexual	0
NIR#	2

* Out of the 11 homosexual/bisexuals, three are/were IV drug users

No identified risk group (NIR)

CASES BY AGE GROUP

Less than 20	0
20 - 29	7
30 - 39	4
40 - 49	2
50 - 59	0
60 or more	2

OPPORTUNISTIC DISEASE

Pneumocystic Carinii	5
Kaposi's Sarcoma	1
Pneumocystis Carinii and Kaposi's Sarcoma	0
Other	9

AIDS IN ARKANSAS

1985 - 1988

Total number of cases

reported	105
Number of deaths	58

CASES BY SEX

Male	99
Female	6

CASES BY RACE

White	82
Black	23

CASES BY RISK GROUP

Homosexual/Bisexual*	82
IV Drug User	12
Hemophiliac	0
Transfusion	4
Heterosexual**	2
NIR#	5

* Out of the 82 homosexual/bisexuals, 19 are/were IV drug users

** The two (2) heterosexual cases represent two female contacts to IV drug users and the five (5) NIR [No identified risk group] represent two (2) male contacts to prostitutes, one (1) found on autopsy - risk group unknown, and two (2) risk group unknown.

No identified risk group (NIR)

CASES BY AGE GROUP

Less than 20	0
20 - 29	38
30 - 39	42
40 - 49	18
50 - 59	3
60 or more	4

OPPORTUNISTIC DISEASE

Pneumocystic Carinii	50
Kaposi's Sarcoma	5
Pneumocystis Carinii and Kaposi's Sarcoma	3
Other	47

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NEW EDITORIAL BOARD FOR ARKANSAS JOURNAL

Martha S. Taylor, Journal Managing Editor

The *Journal of the Arkansas Medical Society* has added a six-physician editorial board to its regular staff. The board will be responsible for article selection and submission as well as scheduling an editorial calendar.

The board members are Drs. David L. Barclay, Robert E. Glenn, William E. Golden, John D. Olson, Ben N. Saltzman and I. Dodd Wilson.

The editorial board replaces the single editorship position left vacant since Dr. Alfred Kahn retired from the position in 1986. The six members of the board have over 190 combined years of professional experience and are considered to be leaders in their respective fields. The members represent six major areas of

medicine - Obstetrics and Gynecology, Pediatrics, Internal Medicine, Surgery, Family Practice and the University of Arkansas for Medical Sciences.

In addition to being responsible for scientific article review, the six will be requesting articles of particular interest to the AMS membership and submitting monthly editorials. They have also expressed interest in preparing special issues of the *Journal* which deal with major subjects affecting health care in Arkansas. The Board has proposed that guest editorials be accepted for review and that an editorial calendar be prepared.

Profiles of the six members of the editorial board follow.

DAVID LOUIS BARCLAY, M.D. OBSTETRICS AND GYNECOLOGY LITTLE ROCK, ARKANSAS

Birthdate/Place:	September 17, 1930; Everett, WA
Pre-medical education:	University of Washington, Seattle, 1951
Medical education:	University of Washington School of Medicine, 1955
Internship:	Baltimore City Hospital, Baltimore, MD
Residency:	Obstetrics and Gynecology, Tulane Division, Charity Hospital of Louisiana, New Orleans
Certified:	American Board of Obstetrics and Gynecology, 1964 Special Competence in Gynecologic Oncology, 1977



After completing his residency, Dr. Barclay held the positions of Instructor, Assistant Professor and Professor of Obstetrics and Gynecology at Tulane University. From 1970 to 1978, he was a Professor and the Chairman of the Department of Obstetrics and Gynecology, University of Arkansas for Medical Sciences. He is on active staff at St. Vincent Infirmary Medical Center and Doctors Hospital in Little Rock as well as being a consultant staff member at several other area hospitals.

Dr. Barclay is a Councilor for the Arkansas Medical Society's 10th Councilor District and the 1987 President of the Pulaski County Medical Society. Other membership affiliations include the American Gynecological and Obstetrical Society, American College of Surgeons, Southern Medical Association (Councilor-AR, 1976-80), American College of Obstetricians and Gynecologists, and the Little Rock Gynecological Society, of which he is President. He also holds honorary

membership in the North Carolina, Kansas City, Southeastern, and Southwest Obstetrical and Gynecological Societies.

Locally, Dr. Barclay has been highly involved with the Arkansas Family Planning Council, the American Cancer Society (Pulaski County unit), and the Cancer



Committees for both AMS and St. Vincent Infirmary. He is currently the Chairman of the Medical Ethics Committee at St. Vincent Infirmary.

Dr. Barclay is also active on the national level with the American College of Obstetricians and Gynecologists.

**ROBERT EDWARD GLENN, M.D.
PEDIATRICS
LITTLE ROCK, ARKANSAS**

Birthdate/Place: October 24, 1936; Memphis, TN
Medical education: University of Arkansas for Medical Sciences, 1965
Internship/Residency: Department of Pediatrics, UAMS
Certified: American Board of Pediatrics, 1971

Dr. Glenn began private practice in 1968 and continued to do so until 1979 when he became a clinical professor with the pediatrics department of UAMS. After becoming an Associate Professor at the same institution, Dr. Glenn became the Director of Clinics at Arkansas Children's Hospital.

In 1982, Dr. Glenn was the founder of the First Annual Emergency Care of the Critically Ill Child Program which has been very successful each year since its inception.

He is currently the Chairman of the Ad Hoc committee on Nursing Data Base Forms and the Admissions Committee of the Council on Academic Affairs. Dr. Glenn is also the ACH Safety Committee chairman. He is the co-director of the pediatric housestaff training program which involves interviewing all the applicants for housestaff positions. He is also the resident advisor program supervisor which keeps him actively involved with the goals and problems of residents.

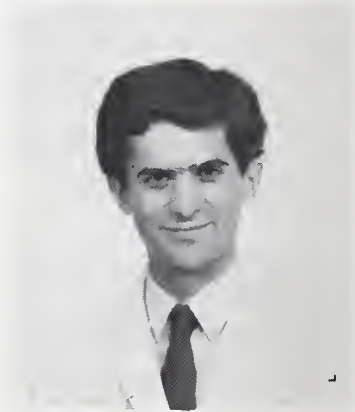
Dr. Glenn is the Section Leader for Ambulatory General Pediatrics. His responsibilities include development and implementation of clinical care programs, faculty recruitment, retention and development as well as budget activities.

Dr. Glenn holds a membership in the state and county medical societies as well as the American Academy of Pediatrics, of which he is a Diplomate. He also belongs to the Arkansas Academy of Pediatrics and the Southern Society for Pediatric Research. His civic and community activities include presentations on safety seats, poisoning, and immunizations. He has lobbied for the safety seat law with Arkansas Blue Cross, Arkansas Advocates for Children and the State Police.

Currently, Dr. Glenn is working on several research projects including the usage of aspirin vs. acetaminophen in children and cost effectiveness of continuity of care vs. episodic care.

**WILLIAM E. GOLDEN, M.D.
INTERNAL MEDICINE
LITTLE ROCK, ARKANSAS**

Birthdate/Place: December 26, 1953; Brooklyn, NY
Pre-medical education: Brown University, 1975
Medical education: Baylor College of Medicine, Houston, TX, 1978
Residency: Internal Medicine, Rush-Presbyterian-St. Luke's Medical Center, Chicago
Certified: American Board of Internal Medicine



Dr. Golden's professional experience includes being selected as the Director of the Division of General Internal Medicine at the University of Arkansas for Medical Sciences in 1984.

Most recently he became a member of the Perioperative Assessment Research Section (PARS) at the University in addition to his other academic and committee activities. He is a member of the Task Force on

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'Tagamet' has been reported to reduce the hepatic metabolism of warfarin-type anticoagulants, phenytoin, propranolol, chlorthalidone, diazepam, lidocaine, theophylline and metronidazole. Clinically significant effects have been reported with the warfarin anticoagulants; therefore, close monitoring of prothrombin time is recommended, and adjustment of the anticoagulant dose may be necessary when 'Tagamet' is administered concomitantly. Interaction with phenytoin, lidocaine and theophylline has also been reported to produce adverse clinical effects.

However, a crossover study in healthy subjects receiving either 'Tagamet' 300 mg. q.i.d. or 800 mg. h.s. concomitantly with a 300 mg. b.i.d. dosage of theophylline (Theo-Dur®, Key Pharmaceuticals, Inc.),

demonstrated less alteration in steady-state theophylline peak serum levels with the 800 mg. h.s. regimen, particularly in subjects aged 54 years and older. Data beyond ten days are not available. (Note: All patients receiving theophylline should be monitored appropriately, regardless of concomitant drug therapy.)

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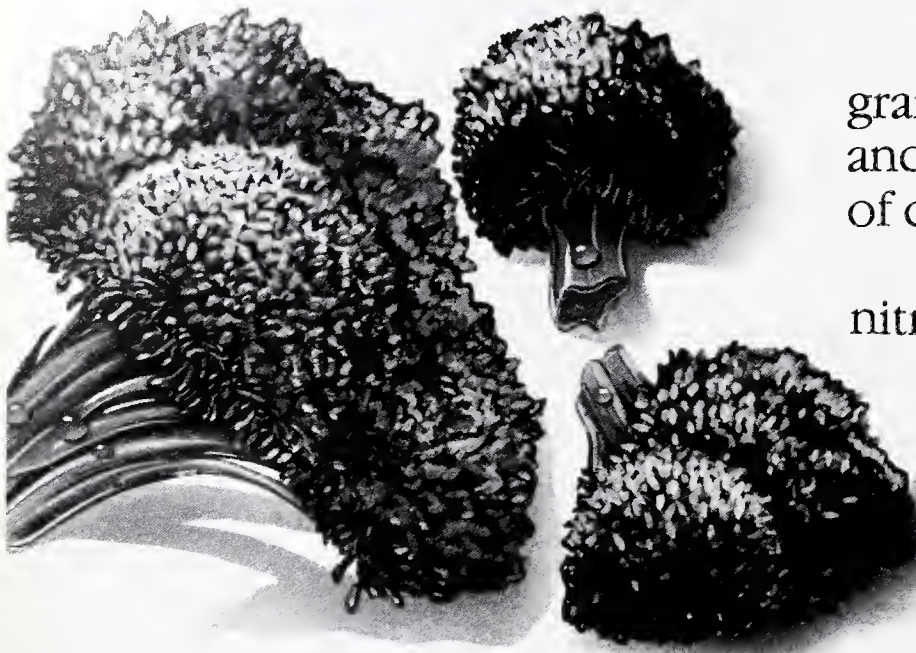


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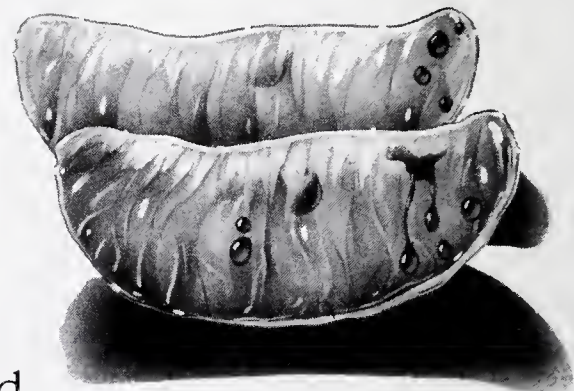
RESULTS

A defense against cancer can be cooked up in your kitchen.



Fruits, vegetables, and whole-grain cereals such as oatmeal, bran and wheat may help lower the risk of colorectal cancer.

Foods high in fats, salt- or nitrite-cured foods like ham, and



There is evidence that diet and cancer are related. Some foods may promote cancer, while others may protect you from it.

Foods related to lowering the risk of cancer of the larynx and esophagus all have high amounts of carotene, a form of Vitamin A which is in cantaloupes, peaches, broccoli, spinach, all dark green leafy vegetables, sweet potatoes, carrots, pumpkin, winter squash and tomatoes, citrus fruits and brussels sprouts.



Foods that may help reduce the risk of gastrointestinal and respiratory tract cancer are cabbage, broccoli, brussels sprouts, kohlrabi, cauliflower.

fish and types of sausages smoked by traditional methods should be eaten in moderation.

Be moderate in consumption of alcohol also.

A good rule of thumb is cut down on fat and don't be fat.

Weight reduction may lower cancer risk. Our 12-year study of nearly a million Americans uncovered high cancer risks particularly among people 40% or more overweight.

Now, more than ever, we know you can cook up your own defense against cancer. So eat healthy and be healthy.

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cancer alone.



Medical Informatics, the Chairman of the Campus Library Committee and the Committee on Interdisciplinary Programs on the Chancellor's Six-Year Planning Project.

Dr. Golden is a delegate to the House of Delegates of the Arkansas Medical Society as well as a member of the Pulaski County Medical Society's Executive Committee.

On the national level, Dr. Golden was the Chairman of the Hearing Committee on Medical Sciences for the Health Policy Agenda Project and a member of the

Task Force on Section Planning for the Medical School Section of the AMA. He is a member of the Society for General Internal Medicine, the American College of Physicians, and the American Society of Internal Medicine.

Dr. Golden lectures frequently and speaks nationwide. He is also a prolific writer with over 30 articles published since 1980. He has held editorial positions for JAMA, Annals Internal Medicine, and the Archives of Internal Medicine. Dr. Golden was an editorial board member for the New York State Journal of Medicine.



**JOHN D. OLSON, M.D.
SURGERY
FORT SMITH, ARKANSAS**

Birthdate/Place:	November 7, 1912; Minot, ND
Pre-medical education:	University of North Dakota, 1936
Medical education:	University of Pennsylvania, 1938 University of Minnesota, 1943 (M.S.)
Internship:	Presbyterian Hospital, Philadelphia, PA
Residency:	Mayo Foundation, Rochester, MN Fellowship, Mayo Foundation, Rochester, MN
Certified:	American Board of Surgery, 1947

Dr. John D. Olson is currently a surgeon on the staff of the Holt-Krock Clinic in Fort Smith. He is affiliated with Sparks Regional Medical Center and St. Edward Mercy Medical Center in Fort Smith as well as the Crawford Memorial Hospital in Van Buren, Arkansas. He is also a consultant staff member for hospitals in Fayetteville and Springdale, AR, and Tahlequah, OK.

Dr. Olson is a member in the Sebastian County Medical Society, AMS, and the AMA. He is a member of the Southwestern Surgical Congress and the Southern and Western Surgical Associations.

Dr. Olson has been the author or co-author of 10 articles which included the topics of massive bowel resection syndrome and rotational arch aortography.

**BENJAMIN N. SALTZMAN, M.D.
FAMILY PRACTICE
LITTLE ROCK, ARKANSAS**

Birthdate/Place:	April 24, 1914; Ansonia, CT
Pre-medical education:	University of Oregon, Eugene, 1935 (B.A.) University of Oregon, Eugene, 1936 (M.A.)
Medical education:	University of Oregon School of Medicine, Portland, 1940.
Internship/Residency:	Gorgas Hospital, Ancon, Canal Zone
Certified:	American Academy of Family Practice, 1970; recertified 1977



Dr. Saltzman is currently the Medical Director of the Pulaski County Unit of the Arkansas Department of Health. He is a former Director of the Arkansas Department of Health, and is Professor-Emeritus, Department of Family and Community Medicine in the College of Medicine, University of Arkansas for Medical

Sciences, Little Rock, AR. He also practiced medicine in Mountain Home, Arkansas for 28 years.

Dr. Saltzman is a Diplomate of the American Board of Family Practice, a Fellow and Charter Member of the American Academy of Family Physicians, and a Fellow of the American College of Preventive Medicine.

He is a former president of the Arkansas Lung Association, the Arkansas Division of the American Cancer Society, the Arkansas Association for Retarded Citizens, the Tri-States Association for Cripples, the Southern Tuberculosis Conference and the State Elks Association. He now holds the position of President of the Arkansas Brotherhood of the National Conference of Christians and Jews and the Senior Board of the Florence Crittenton Home of Arkansas. He is active in the Arkansas Chapter of the American Academy of Family Physicians, the Arkansas Medical Society, the Ozark Regional Mental Health Center, the Arkansas

State Board of Health and the Arkansas Endowment for the Humanities.

Dr. Saltzman has served on national and international committees and boards, holds many awards and is listed in Who's Who in the South and Southwest, in America, and in the World. He has had over 30 articles published in state and national medical journals.

Dr. Saltzman is a 33rd Degree Scottish-Rite Mason and Shriner. He is a past president of the Rotary Club of Mountain Home as well as being a past District Governor, past International Director, and past Trustee of the Rotary Foundation.

**I. DODD WILSON, M.D.
DEAN, UNIVERSITY OF ARKANSAS
FOR MEDICAL SCIENCES
LITTLE ROCK, ARKANSAS**

Birthdate/Place: July 10, 1936; St. Peter, MN
Pre-medical education: Dartmouth College, Hanover, NH, 1958
Medical education: Harvard Medical School, Boston, MA, 1970
Internship: University of Minnesota Hospitals
Fellowship: University of Minnesota Medical Center
Certified: American Board of Internal Medicine, 1970



Before becoming the Dean of the University of Arkansas College of Medicine, Dr. Wilson had a 20-year affiliation with the University of Minnesota Medical School. His positions included Professor of Medicine and Vice-Chairman of the Department of Medicine.

Dr. Wilson's committee involvement includes being the Chairman of the University of Minnesota Clinical Associates Ad Hoc Committee for Financial Matters in 1986 and the Co-Chairman of the Medical School Committee on Committees. While at the University of Minnesota, he was also a member of the University of Minnesota Clinical Associate Planning and Marketing

committee and a member of the Hospital Quality Assurance Steering Committee.

Dr. Wilson holds a membership with the American Federation for Clinical Research, the Minneapolis Society of Internal Medicine, and the American Gastroenterological Association. He is also an active member of the Central Society for Clinical Research, the Minnesota Society of Internal Medicine and the American Association for the Study of Liver Disease.

Dr. Wilson has had more than 90 articles and abstracts published in state, national and specialty medical journals.

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Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalamic centers and release of posterior pituitary hormone.

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Indications: Yocon® is indicated as a sympathicolytic and mydriatic. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.^{1,2} Also dizziness, headache, skin flushing reported when used orally.^{1,3}

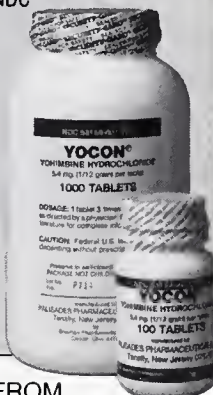
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.^{1,3,4} 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to 1/2 tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.³

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

Rev. 1/85



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THINGS TO COME

APRIL 7

Criteria Based Review Seminar. Sponsored by Temple University School of Medicine. Dallas Hilton Inn, Dallas, TX. Fees: \$185 per person; \$175 per person when two or more register from the same organization. Further information contact: Continuing Education Corporation, 325 Fairway Drive, Etters, PA 17319; (717) 938-8234.

APRIL 12

1988 QA Update Seminar. Sponsored by Temple University School of Medicine. Airport Hilton Inn, Philadelphia, PA. Approved for Category I credit hours. Fees: \$185 per person; \$175 per person when two or more register from the same organization. Further information contact: Continuing Education Corporation, 325 Fairway Drive, Etters, PA 17319; (717) 938-8234.

APRIL 15 - 16

Annual Meeting of the Arkansas Dermatologic Society. Sponsored by the Arkansas Dermatologic Society. University of Arkansas for Medical Sciences, Little Rock. Guest speaker: Steven Katz, National Institute of Health. His topic will be "The Skin as an Immunological Organ". Further information: Dow Stough, M.D., Department of Dermatology, UAMS, 661-5110.

APRIL 21 - 24

Second National Internal Medicine Leadership Development Conference "Internal Medicine: Taking Pride, Making Strides." Sponsored by the American Society of Internal Medicine. Washington,

D.C. For further information contact: Mark Leasure, American Society of Internal Medicine, 1 (800) 338-ASIM.

APRIL 29 - 30

Cancer Management Courses 1988. Sponsored by the American College of Surgeons. Los Angeles, California. Registration fees: \$350 non-Fellows ACS; \$275 Fellows, Fellow Candidates and Residents. For further information contact: Cancer Department, ACS, 55 East Erie Street, Chicago, IL 60611; (312) 664-4050.

MAY 10

Hospital/Medical Staff Credentialing Seminar. Sponsored by Temple University School of Medicine. Southfield Hilton, Southfield, Michigan. Approved for Category I credit. Fees: \$185 per person; \$175 per person when two or more persons register from the same organization. For further information contact: Continuing Education Corporation, 325 Fairway Drive, Etters, PA 17319; (717) 938-8234.

MAY 11 - 14

Ambulatory Surgery '88 "Exponential Innovation." Sponsored by the Federated Ambulatory Surgery Association. Omni Shoreham Hotel, Washington, D.C. Application for Category I credit has been made. Registration fees before April 11th: FASA member, \$375; non-members, \$475; FASA RN member, \$175; Non-member RN, \$225; Spouse/Guest, \$50. Registration fees after April 11th: FASA member, \$400; Non-member, \$495; FASA RN member, \$200; Non-member RN, \$245. Further information: FASA, 700 North Fairfax Street, #520, Alexandria, VA 22314.

KEEPING UP

Cholesterol: Current Concepts for Physicians

Self-Study Course for Physicians. Sponsored by the National Health, Lung and Blood Institute. A national cholesterol education program is available through the Arkansas Medical Society office in which a physician studies at home. Two hours Category I credit. Further

information: David Wroten, Arkansas Medical Society, P. O. Box 5776, Little Rock, AR 72215; (501) 224-8967.

Aortic Aortic Occlusive Disease, Patient Management

March 17, 12:30 p.m. Presented by Donald Patrick, M.D. Sponsored by AHEC - Fort Smith. Sparks

Regional Medical Center, Medical Library, Fort Smith.
One Category I credit hour.

Weight Loss Diets

March 22, 12:30 p.m. Presented by Ginger Ogle, R.D.
Sponsored by AHEC - Fort Smith. Sparks Regional
Medical Center, 7th Floor Dining Room. One Category
I credit hour.

Emergency Medicine Update

March 24 - 25. Sponsored by Baptist Medical Center.
Little Rock Hilton. For further information contact
Baptist Medical Center - Continuing Education.

Anesthesiology Update

March 26, 8:00 a.m. - 4:00 p.m. Presented by Richard
B. Clark, M.D. Sponsored by UAMS. University
Conference Center, Little Rock. Four and three-
quarters Category I credit hours. Fee: no charge for
Arkansas Society of Anesthesiologists; non-members,
\$40.; CRNA's, \$20.

Diabetic Diets

March 30, 12:30 p.m. Presented by Ginger Ogle, R.D.
Sponsored by AHEC - Fort Smith. Sparks Regional
Medical Center, 7th Floor Dining Room, Fort Smith.
One Category I credit hour.

Twenty-third Annual Surgical Symposium

March 31 - April 2, time to be announced. Presented
by Robert W. Barnes, M.D and Dr. Richard Westerman.
Sponsored by the University of Arkansas College of
Medicine. Arlington Hotel, Hot Springs, AR. Approxi-
mately 7 Category I credit hours. Fee: ACS members,
\$25; non-ACS members, \$75; UAMS faculty and resi-
dents, \$25.

Rehabilitative Services

April 5, 12:30 p.m. Presented by Russell Williams,
ACSW. Sponsored by AHEC Fort Smith. Medical
Library, Sparks Regional Medical Center.

Symposium on Critical Care Medicine

April 6-9, 7:45 a.m. - 11:15 a.m. Presented by Glen F.
Baker, M.D.(UAMS) and Milton D. Deneke, M.D
(UTHSC). Sponsored by UAMS and the University of
Tennessee, Memphis, College of Medicine. Arlington
Hotel, Hot Springs. Nine Category I credit hours. Fee:
\$150.

Treating Pneumonia

April 13, 12:30 p.m. Presented by Wendell Ross,
M.D. Sponsored by AHEC Fort Smith. Medical
Library, Sparks Regional Medical Center.

Pharmacologic Management of Hypertension

April 14, 12:00 noon. Presented by Taylor Prewitt,
M.D. Sponsored by AHEC Fort Smith. Medical
Library, Sparks Regional Medical Center.

1988 Cardiovascular Conclave

April 16, 8:30 a.m. - 12:00 noon. Presented by Anne
Goldberg, M.D., Washington University; Patrick
Meacham, M.D., Vanderbilt University; Arthur B. Lee,
M.D. Morehouse School of Medicine; Robert Zeff,
M.D., De Moines, Iowa; and Pat Shanahan, M.D., Louis-
ville, Kentucky. Sponsored by the Arkansas Cardiovascu-
lar Surgery Associates. Three Category I credit hours.
For further information contact: Patty, 224-5666.

Medical Alumni Day "Topics in Internal Medicine"

April 16, 8:00 a.m. - 5:00 p.m. Presented by Marvin L.
Murphy, M.D., and Dr. George L. Ackerman. Spon-
sored by the UAMS College of Medicine. University
Conference Center, Little Rock. Four Category I credit
hours. Fee: Physicians, \$125; spouses, \$40 (banquet fee).

Antihistamines

April 19, 12:30 p.m. Presented by Charles Marsh,
Pharm. D. Sponsored by AHEC Fort Smith. Medical
Library, Sparks Regional Medical Center.

T & A Problems Recurrent Tonsillitis

April 20, 12:00 noon. Presented by Michael Gwart-
ney, M.D. Sponsored by AHEC Fort Smith. Fourth
Floor Conference Room, Sparks Regional Medical
Center.

Abdominal Aortic Aneurysm

April 21, 12:30 p.m. Presented by Rowland P.
Vernon, M.D. Sponsored by AHEC Fort Smith. Medi-
cal Library, Sparks Regional Medical Center.

Family Life Cycles

April 29, 12:30 p.m. Presented by Russell Williams,
ACSW. Sponsored by AHEC Fort Smith. Medical
Library, Sparks Regional Medical Center.

Annual W. W. Stead Chest Symposium

April 30 - May 1, times to be announced. Presented by
F. Charles Hiller, M.D. Sponsored by UAMS College of
Medicine. Holiday Inn, North Little Rock. Fees and
Category I credit to be announced.

Behavioral Management of Stress Disorders

May 5, 12:30 p.m. Presented by Phil Barling, Ph.D.
Sponsored by AHEC Fort Smith. Medical Library,
Sparks Regional Medical Center.

Cellulitis

May 11, 7:00 a.m. Presented by Eric Westerman,
M.D. Sponsored by AHEC Fort Smith. St. Edward
Mercy Medical Center.

Oral Health in the Elderly

May 11, 8:00 a.m. - 4:30 p.m. Presented by David A.
Lipschitz, M.D., and Dr. Ronni Chernoff. Sponsored by
UAMS College of Medicine. Excelsior Hotel, Little
Rock. Six Category I credit hours. Fee: VA employees,
\$25; all others, \$50.

Diabetic Foot Infections

May 11, 12:00 noon. Presented by Eric Westerman,
M.D. Sponsored by AHEC Fort Smith. Seventh Floor
Dining Room, Sparks Regional Medical Center.

Treating Depression in the Elderly

May 18, 12:30 p.m. Presented by Wendell Ross, M.D.
Sponsored by AHEC Fort Smith. Medical Library,
Sparks Regional Medical Center.

Infra-inguinal Lower Extremity Arterial Reconstruction

May 19, 12:30 p.m. Presented by Leon P. Woods,
M.D. Sponsored by AHEC Fort Smith. Medical
Library, Sparks Regional Medical Center.

Drugs and Rheumatoid Arthritis

May 24, 12:30 p.m. Presented by Charles Marsh,
Pharm. D. Sponsored by AHEC Fort Smith. Medical
Library, Sparks Regional Medical Center.

Family Reactions to Acute Illness

May 25, 12:30 p.m. Presented by Russell Williams,
ACSW. Sponsored by AHEC Fort Smith. Medical
Library, Sparks Regional Medical Center.

Recurring Education Programs

EL DORADO - AHEC

Behavioral Sciences Conference, first and fourth Friday, 12:15 p.m., AHEC - South Arkansas.
Chest Conference, third Wednesday, 12:30 p.m., Warner Brown Hospital
Fracture Conference, third Tuesday, 12:15 p.m., AHEC-South Arkansas
Gynecology-Pathology Conference, second Friday, 12:15 p.m., AHEC-South Arkansas
Internal Medicine Conference, first, second and fourth Wednesday, 12:15 p.m., AHEC-South Arkansas
Pathology Conference, second Tuesday, 12:15 p.m., AHEC-South Arkansas
Pediatric Conference, third Friday, 12:15 p.m., Union Medical Center.
Obstetrics-Gynecology Conference, fourth Thursday, 12:15 p.m., AHEC-South Arkansas
Surgical Conference, first, second and third Monday, 12:15 p.m., AHEC-South Arkansas
Tumor Clinic, fourth Tuesday, 12:15 p.m., AHEC-South Arkansas

FAYETTEVILLE - AHEC NORTHWEST

City Hospital Staff Meeting, second Friday, 12:00 noon, Fayetteville City Hospital
Medicine Teaching Conference, first, third and fifth Thursday, 1:00 p.m., AHEC - NW, 241 W. Spring, Fayetteville
Nephrology Lecture Series, fourth Thursday, 12:30 p.m., AHEC- NW, 241 W. Spring, Fayetteville
Rheumatology Lecture Series, first Tuesday, 12:30 p.m., VA Medical Center
St. Mary's Saturday Morning Problem Conference, each Saturday, 8:30 a.m., St. Mary's Rogers Hospital, Rogers, AR.

FAYETTEVILLE - VA MEDICAL CENTER

Medical Conference (varying topics), each Friday, 12:30 p.m., Conference Room, Building 1, VAMC

FORT SMITH-AHEC

Cardiology Conference, first Wednesday, 12:00 noon, Sparks Regional Medical Center, 4th Floor Conference Room
Neurology Conference, first Thursday, 12:30 p.m., Sparks Regional Medical Center, Medical Library

HOT SPRINGS-AMI NATIONAL PARK MEDICAL CENTER

Continuing Medical Education Luncheon for Medical/Dental Staff, varying topics, second Friday, 12:30 p.m., Classrooms, AMI National Park
Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, first and third Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Annex Building
Arkansas Methodist Hospital CME Conference, last Friday, 7:00 a.m., Arkansas Methodist Hospital, Paragould

Cherokee Village Tumor Conference, third Monday, every four months, 6:00 p.m., Ozark Baptist Memorial Hospital, Cherokee Village.
Chest Conference, fourth Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room
Independence County Medical Society, second Tuesday, 7:30 p.m., White River Medical Center, Batesville
Interesting Case Conference, second and fifth Tuesday, when applicable, 12:00 noon, St. Bernard's Dietary Conference Room
Kennett Tumor Conference, second Tuesday (every other month), 12:00 noon, Twin Rivers Regional Medical Center, Kennett, MO
Methodist Hospital of Jonesboro CME Staff Conference, second Tuesday, 7:30 p.m., Cafeteria, Methodist Hospital of Jonesboro
Monthly Medical Lecture Series, third Tuesday, 7:30 p.m., rotates each month between Walnut Ridge and Pocahontas
Neuroradiology Conference, second Friday, 12:00 noon, St. Bernard's Dietary Conference Room.
Newport Tumor Conference, second Wednesday, 12:00 noon, rotates each month between Harris Clinic and Newport Hospital
Perinatal Conference, second Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Piggott Tumor Conference, third Wednesday, 12:00 noon, Piggott Hospital, every four months.
Poplar Bluff Tumor Conference, third Wednesday, 12:00 noon, Lucy Lee Hospital, Poplar Bluff.
Tumor Conference, fourth Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Wynne Tumor Conference, third Monday, 6:00 p.m., Grecian Steak House, Wynne, every four months.

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Alternating Sub-Specialty Conference, third Wednesday, 12:00 noon, Second Floor Classroom
General Pediatrics Seminar, first and third Friday, 12:00 noon, Second Floor Classroom
Genetics Conference, each Wednesday, 12:00 noon, Sturgis Building, Room 457
Infectious Disease Conference, second Wednesday, 12:00 noon, Sturgis Building, Room 121
Metabolic Neurology Conference, first Wednesday, 1:00 p.m., Physicians Lounge, 2nd Floor
Pediatric Grand Rounds, each Tuesday, 8:00 a.m., Sturgis Building, Auditorium
Pediatric Neuropsychiatry Conference, second Wednesday, 1:30 p.m., Second Floor Classroom
Pediatric Neuroscience Conference, first Thursday, 8:00 a.m., Second Floor Classroom
Pediatric Pathology Conference, first Wednesday, 12:00 noon, Second Floor Classroom
Pediatric Pharmacology Conference, fifth Wednesday when applicable, 12:00 noon, Second Floor Classroom
Pediatric Radiology Conference, first and third Thursday, 12:00 noon, Second Floor Classroom
Pediatric Research Conference, third Monday, 12:00 noon, Sturgis Building, Rooms S120-121
Problem Case Conference, second and fourth Friday, 12:00 noon, Second Floor Classroom

LITTLE ROCK-ST. VINCENT INFIRMARY

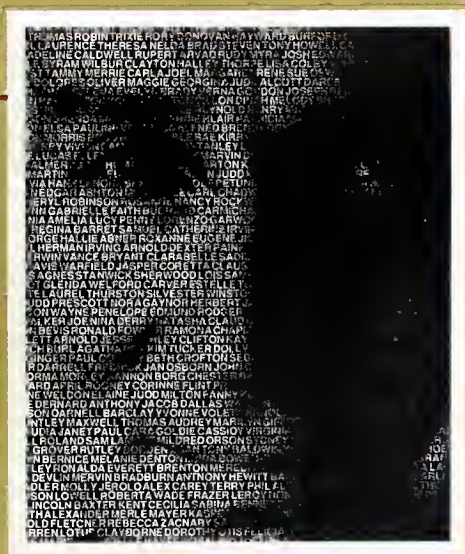
Cancer Conference, first Wednesday, 12:00 noon, CARTI Auditorium. A meal is provided.
Cancer Conference, third and fourth Thursday, 12:00 noon, Room S1174K, Lab. A meal is provided.
General Medicine Journal Club, each Tuesday, 12:00 noon, Medical Affairs Conference Room. Bring your lunch.
Hematology-Oncology Conference, second Thursday, 12:00 noon, Laboratory Library. A meal is provided.
Interhospital Urology Grand Rounds, first Tuesday, 5:30 p.m., Maumelle Room. Refreshments are provided.
Neuropathology Conference, third Tuesday, 5:00 p.m., Room S1174K, Laboratory. Refreshments are provided.
Pediatric Conference, first Tuesday, 12:30 p.m., Maumelle Room. A meal is provided.
Peripheral Vascular Disease Conference, fourth Tuesday, 6:00 p.m., Maumelle Room. A meal is provided.
Pulmonary Conference, second and fourth Wednesday, 12:00 noon, DeSoto Room. A meal is provided.

LITTLE ROCK-UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

ACRC/CARTI Tumor Conference, each Wednesday, 12:00 noon, CARTI, Markham & University
ACRC Oncology Forum, fourth Thursday, 4:00 p.m., UAMS Education Building, Room G137
Anesthesia Conference Series, times and dates vary, UAMS Education Building, Room G/110 A&B
Anesthesia Morbidity and Mortality Conference, every second and fourth Tuesday, 6:45 a.m., UAMS Education Building, Room G/110 A&B. Every first, second and third Thursday, 4:00 p.m., Room G/112 A&B.
Child Psychiatry Clinical Case Conference, first Friday, 1:00 p.m., UAMS Child Study Center Conference Room.
Interdisciplinary Gynecologic Cancer Conference, each Friday, 12:30 p.m., UAMS Education Building, Room G106 A&B
Medicine Grand Rounds, each Thursday, 12:15 p.m., UAMS Shorey Auditorium
Medicine Research Conference, each Wednesday, 4:30 p.m. Shorey Building, Room 3506
Neurology Clinical Case Conference, three or four Thursdays per month, 8:00 a.m. Rotates between UAMS (7D33) and LRVAMC (3S) and ACH.
Neuropathology Conference, every Tuesday, 4:00 p.m. Rotates between UAMS (7D33) and LRVAMC (Autopsy Room).
Neuroscience Conference (Basic), second, third, and fourth Monday, 8:00 a.m., UAMS 7D33.
Ob/Gyn Grand Rounds, each Wednesday, 7:30 a.m., UAMS Education Building, Room G/131B
Ophthalmology Problem Case Conference, each Thursday, 4:00 p.m., UAMS AAC Eye Clinic, Room 3/150.
Orthopaedic Basic Science Conference, occasional Tuesdays, 11:00 a.m., UAMS Education Bldg., Room B/135.
Orthopaedic Bibliography Conference, each Tuesday, 8:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Fracture Conference, each Tuesday, 7:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Grand Rounds, each Tuesday, 10:00 a.m., UAMS Education Building, Room B/135
Psychiatry Grand Rounds/Clinical Case Conference, each Friday, 11:00 a.m., UAMS Shorey Auditorium
St. Vincent Urology Grand Rounds, first Tuesday, 5:30 p.m., St. Vincent Infirmary, Education Building, Room 159
Surgery Grand Rounds, each Monday, 5:00 p.m., UAMS Education Building, Room G/141A
Surgery Morbidity and Mortality Conference, each Wednesday, 5:00 p.m., UAMS Education Building, Room G/131A.
Surgery Review Conference, each Monday, 6:00 p.m., UAMS Education Building, Room G/141A
Urologic Topics (Resident Presentation), once or twice monthly, 5:00 p.m., UAMS
Urology Grand Rounds, twice monthly, 5:00 p.m., VAMC
Urology Morbidity and Mortality Conference, last Wednesday, 5:00 p.m., UAMS
Uro-Radiology Workshop (Urologic Imaging), first Thursday, 5:00 p.m., UAMS
VA Diagnostic Imaging Conference, every Tuesday, Wednesday and Thursday, 8:00 a.m., LRVA Nuclear Medicine Conference Room, Room 1D173

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...like the more than one million patients who have received **INDERAL® LA**.

In a recent survey, 4,120 participating physicians gave us their views¹ on **INDERAL LA** in the treatment of hypertension, angina and migraine.

INDERAL LA is their preferred beta blocker

...of the nearly three out of four physicians responding to the questionnaire, an impressive 97% rated **INDERAL LA** good to excellent for overall performance. Virtually all cited efficacy, tolerability, long-term cardiovascular protection and once-daily convenience as important factors in their choosing to prescribe **INDERAL LA**.

INDERAL LA promotes patient compliance

...Virtually every responding physician rated patient satisfaction with **INDERAL LA** to be as good as, or better than, other beta blockers.

Like conventional **INDERAL** Tablets, **INDERAL LA** should not be used in the presence of congestive heart failure, sinus bradycardia, cardiogenic shock, heart block greater than first degree and bronchial asthma.

ONCE-DAILY
INDERAL® LA
 (PROPRANOLOL HCl)
 LONG ACTING CAPSULES
 60, 80, 120, 160 mg

The one you know best keeps looking better

Please see next page for brief summary of prescribing information.

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 LIAN FLOYD ELLIOTT HAR
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BRIEF SUMMARY (FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)

INDERAL® LA brand of propranolol hydrochloride (Long Acting Capsules)

DESCRIPTION. Inderal LA is formulated to provide a sustained release of propranolol hydrochloride. Inderal LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. Inderal is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by Inderal, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with Inderal LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of Inderal Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to Inderal LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, Inderal LA has been therapeutically equivalent to the same mg dose of conventional Inderal as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure, and rate pressure product. Inderal LA can provide effective beta blockade for a 24-hour period.

INDICATIONS AND USAGE. Hypertension: Inderal LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. Inderal LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: Inderal LA is indicated for the long-term management of patients with angina pectoris.

Migraine: Inderal LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: Inderal LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. Inderal LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. Inderal is contraindicated in 1) cardiogenic shock; 2) sinus bradycardia and greater than first-degree block; 3) bronchial asthma; 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with Inderal.

WARNINGS. CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or Inderal should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of Inderal therapy. Therefore, when discontinuance of Inderal is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If Inderal therapy is interrupted and exacerbation of angina occurs, it is usually advisable to reinstitute Inderal therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema) — PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. Inderal should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing T_4 and reverse T_3 , and decreasing T_3 .

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL: Propranolol should be used with caution in patients with impaired hepatic or renal function. Inderal (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that Inderal may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

CLINICAL LABORATORY TESTS: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if Inderal (propranolol HCl) is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered a calcium-channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardial contractility or atrioventricular conduction. On rare occasions, the concomitant intravenous use of a beta blocker and verapamil has resulted in serious adverse reactions, especially in patients with severe cardiomyopathy, congestive heart failure, or recent myocardial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol.

Ethanol slows the rate of absorption of propranolol.

Phenytoin, phenobarbital, and rifampin accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased plasma levels of both drugs.

Antipyrine and lidocaine have reduced clearance when used concomitantly with propranolol.

Thyroxine may result in a lower than expected T_3 concentration when used concomitantly with propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY: Pregnancy Category C. Inderal has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. Inderal should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS: Inderal is excreted in human milk. Caution should be exercised when Inderal is administered to a nursing woman.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: Bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System: Light-headedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to cataplexy; visual disturbances; hallucinations; vivid dreams; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics. For immediate formulations, fatigue, lethargy, and vivid dreams appear dose related.

Gastrointestinal: Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: Bronchospasm.

Hematologic: Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: Alopecia, LE-like reactions, psoriasisiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSEAGE AND ADMINISTRATION. Inderal LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from Inderal Tablets to Inderal LA Capsules, care should be taken to assure that the desired therapeutic effect is maintained. Inderal LA should not be considered a simple mg-for-mg substitute for Inderal. Inderal LA has different kinetics and produces lower blood levels. Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION — Dosage must be individualized. The usual initial dosage is 80 mg Inderal LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS — Dosage must be individualized. Starting with 80 mg Inderal LA once daily, dosage should be gradually increased at three- to seven-day intervals until optimal response is obtained. Although individual patients may respond at any dosage level, the average optimal dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE — Dosage must be individualized. The initial oral dose is 80 mg Inderal LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximal dose, Inderal LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS — 80-160 mg Inderal LA once daily.

PEDIATRIC DOSAGE — At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

Reference:

1. Data on file, Ayerst Laboratories.

D7295/188

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VA Medical Service Teaching Conference, each Thursday, 8:00 a.m., NLRVA, Building 66, Room 38
VA Physical Medicine and Rehab Grand Rounds, fourth Friday, 11:00 a.m., NLRVA Building 89, Conference Room, or Arkansas Rehab Institute
VA Surgery Grand Rounds, each Thursday, 12:45 p.m., VAMC, Room 2D109
VA Surgery Service General Chest Topics (Combined Surgery/Medicine Lung Conference), every other Monday, 12:15 p.m., LRVA, Room 2D109.
VA Surgery Service Lung Cancer Conference, every Tuesday, 3:00 p.m., LRVA, Room 2E142.
VA Topics in Rehabilitation Medicine, each Thursday, 7:45 a.m., NLRVA Conference Room, Building 89L
VA Weekly Tumor Conference, each Tuesday, 1:00 p.m., VAMC, Room 2D109

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, third Thursday, 7:00 a.m., Conference Room 1
Grand Rounds Conference, each Wednesday, 12:00 noon, Conference Room 1. Lectures and Case Presentations. A light lunch will be served
Pathology Conference, third Tuesday, 3:00 p.m., Pathology Library. Case Presentations.
Pulmonary Conference, each Tuesday, 12:00 noon, Shuffield Auditorium. A light lunch will be served.
Surgery Conference, each Thursday, 7:30 a.m., Shuffield Auditorium. Lectures and Case Presentations.

PINE BLUFF-AHEC

Behavioral Science Conference, each Thursday, 12:30 p.m., Jefferson Regional Medical Center
Chest Conference, second and fourth Friday, 12:30 p.m., Jefferson Regional Medical Center
Family Practice Conference, fourth Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Internal Medicine Conference, second and fourth Wednesday, 12:30 p.m., Jefferson Regional Medical Center
Obstetrics/Gynecology Conference, second Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Pediatric Conference, third Wednesday, 12:30 p.m., Jefferson Regional Medical Center
Radiology Conference, third Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Southeast Arkansas Medical Lecture Series, third Tuesday, 6:30 p.m., Rosswood County Club. Dinner meeting.
Sub-Specialty Conference, first Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Surgery Conference, first Wednesday, 12:30 p.m., Jefferson Regional Medical Center

TEXARKANA-AHEC

Cardiology Conference, alternating Fridays, 12:00 noon luncheon, St. Michael Hospital
Chest Conference, third Wednesday, 12:30 p.m., St. Michael Hospital
Cine Radiology Conference, fourth Friday, 12:00 noon luncheon, Wadley Regional Medical Center
ECHO Cardiology Conference, fourth Friday, 12:00 noon luncheon, Wadley Regional Medical Center
Neuro-Radiology Conference, second and fourth Wednesday, 7:00 a.m. breakfast, Wadley Regional Medical Center
Surgeons and Pathologists Conference, fourth Thursday, 7:00 a.m. breakfast, Wadley Regional Medical Center
Tumor Conference, first Wednesday, 7:00 a.m., St. Michael Hospital

As organizations accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the organizations named certify that these continuing medical education activities meet the criteria for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

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ELECTROCARDIOGRAM OF THE MONTH

W. C. Roberts, M.D.
John W. Watson, M.D.
UAMS Division of Cardiology
Little Rock, Arkansas

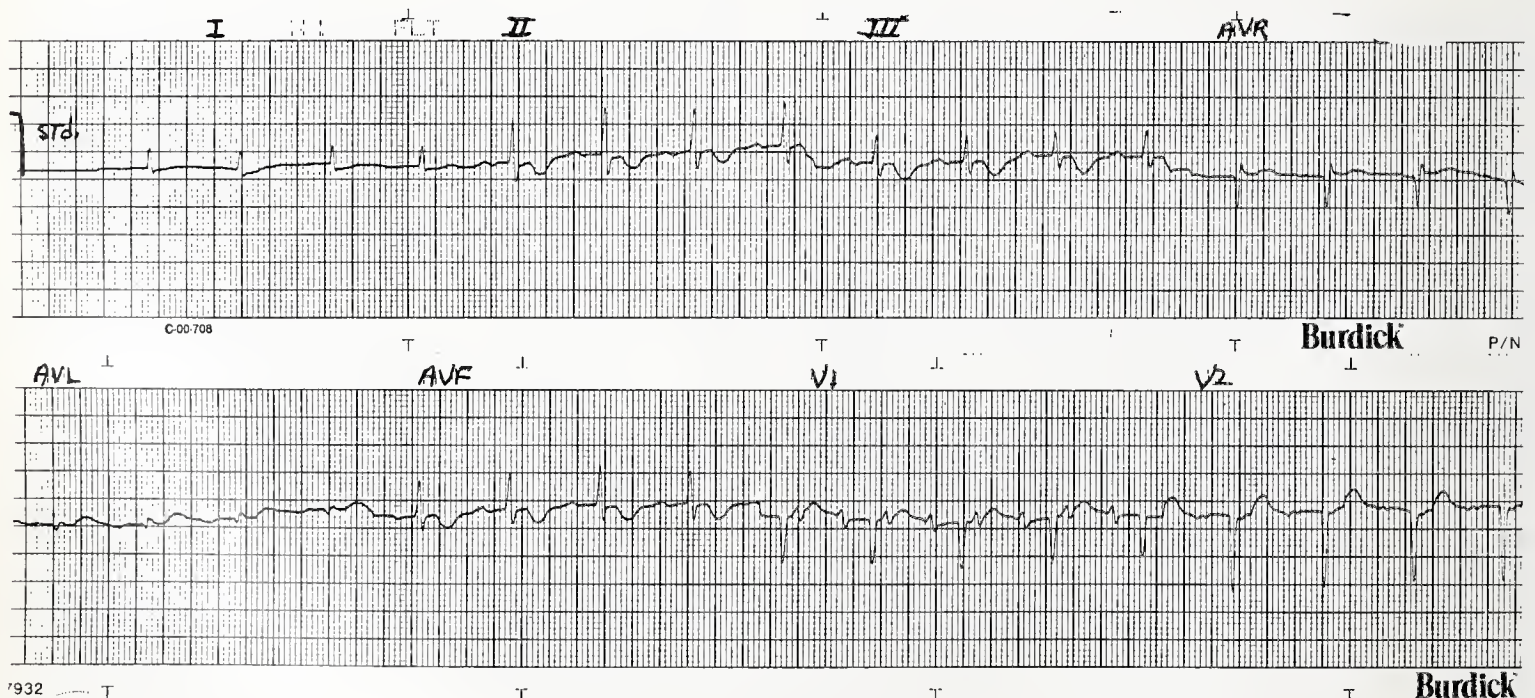
CLINICAL HISTORY:

J. P. is an 82-year-old man who has presented because of chest discomfort, atypically described. His physical examination revealed a murmur of mitral regurgitation. His ECG is shown. What do you think about the trace?

DISCUSSION:

The P-waves are well seen in V_1 . The patient has two P-waves for each QRS complex. The P-wave rate is about 190/minute. The QRS rate is 95/minute. Thus, the patient has atrial tachycardia with 2:1 conduction. Nonspecific ST-T changes are noted also. Enough information is not present to enable one to make a proper determination as to the cause of the atrial tachycardia. The treatment of the arrhythmia would depend upon the etiology, to a great extent.

The editor wishes to thank Dr. Roberts, of Conway, Arkansas for his contribution to this month's feature.



Crisis in black and white.

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Many physicians would like to devote some time to their country in a local Army Reserve unit. We know that making a weekend commitment can be difficult for most physicians. So it is practical for the Army Reserve units to be flexible about time. It's worth discussing.

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To find out about the benefits of serving with a nearby Army Reserve unit, we recommend you call our Army Medical Personnel Counselor.

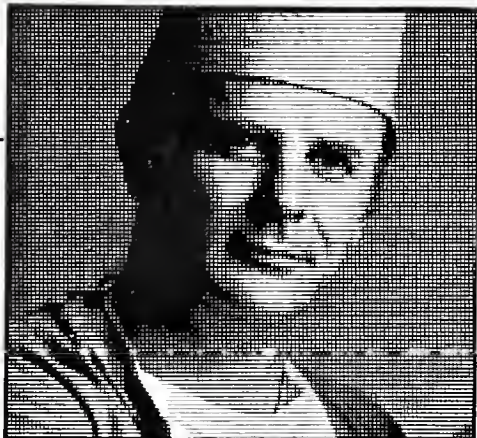
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Joint Commission Adopts New Standards for Risk Management

The Joint Commission on Accreditation of Healthcare Organizations has adopted new standards that require hospital medical staffs to participate in the clinical aspects of risk management activities. In addition, physicians seeking medical staff membership or renewal of clinical privileges are required to disclose any disciplinary actions that may have been taken against them, as well as any adverse judgements or settlements in medical malpractice actions.

The prevention-oriented standards, which go into effect January 1, 1989, require medical staffs to become involved in developing criteria for identifying specific cases with potential risk in clinical aspects of care; correcting problems in clinical care uncovered by risk management activities; and designing programs to reduce risk in the clinical areas of patient care and safety.

The new standards call for a flow of information from the risk management to the quality assurance function in a hospital and for governing body support of risk management activities relating to patient care and safety.

Information to be provided in physician's applications for staff membership or clinical privileges must include pending challenges to and/or loss of any licensure or registration, as well as voluntary or involuntary termination of medical staff membership or loss or reduction of privileges at another hospital. Reporting adverse final judgements or settlements in malpractice actions to the hospital is a minimum requirement. Any additional requirements for disclosure of further information regarding a practitioner's involvement in litigation must be specific in the hospital's medical staff bylaws.

"By working together under the standards' guidelines, hospital management and the medical staff can use information about risks to patients to improve the quality of care," said William Jessee, M.D., Joint Commission vice president for education.

The Joint Commission is considering similar standards for nursing homes, mental health centers, home care organizations, ambulatory care organizations, and hospices.

New Vice Chancellor Named at UAMS

Stephen Piccolo, Jr., 38, former vice president of the University of Medicine and Dentistry of New Jersey (UMDNJ), has been named Vice Chancellor for Administration and Fiscal Affairs at the University of Arkansas

for Medical Sciences. Piccolo succeeds Warren Baur who accepted a position at the University of New Mexico late last year.

As Vice Chancellor for Administration and Fiscal Affairs, Piccolo will be the medical center's chief fiscal officer. He will be administratively responsible for the UAMS Department of Computing, Purchasing, Personnel and the Treasurer, Controller and Budget offices. He will also be responsible for developing and managing the \$101 million annual operating budget for UAMS.

Piccolo was affiliated with UMDNJ for 11 years, most recently as its vice president for Financial Affairs. He was chief financial officer for the three-campus complex, a 530-bed teaching hospital and two community mental health centers. Piccolo coordinated the University's first bond issue for construction of a \$28 million biotechnology facility, and served as a member of the Planning and Budget Council. Before joining UMDNJ, he was business manager for the College Center Building at Kean College of New Jersey.

Piccolo has a bachelor's degree from the University of Bridgeport, CT, and a master of Public Administration degree from the Fairleigh Dickinson University of Rutherford, NJ.

Medicare Budget Cuts Considered by Administration

The Administration is contemplating another round of FY 1989 Medicare budget cuts, but the Congressional Democratic leadership has made it clear that they will resist any more cuts. In the draft budget now under consideration the Administration is eyeing the reduction of about \$1.35 billion in FY 1989 Medicare outlays beyond the 1988 and 1989 savings already accomplished in the 1987 Budget Reconciliation Act, P.L. 100-203.

Representative Dan Rostenkowski (D-IL), Chairman of the House Ways and Means Committee, greeted the public pronouncement of these intentions with a press release stating that the imposition of further Medicare reductions would be improper since this "would violate the budget summit agreement reached last November."

Guidelines Agreed Upon for Pap Smear Screening Frequency

Conservative time intervals when pap smears generally should be performed were recommended by four national medical organizations at a press conference in

Washington, D.C., recently. The consensus guidelines were discussed by representatives of the American Cancer Society, AMA, American College of Obstetricians and Gynecologists, and the The National Cancer Institute.

The guidelines, which were approved by AMA's House of Delegates at the 1987 Interim Meeting call for three successive annual screens for sexual active women over age 19. If the results are negative, subsequent periodic screens should be performed at the discretion of physician and patient, but not less frequently than every three years.

Developed during the past year, the guidelines are intended to encourage professional consistency in time intervals for scheduling Pap smear screens. They also allow for flexibility based on professional judgement for patients whose histories indicate they may be at a higher risk of developing cervical cancer.

Harry Jones, M.D., AMA's Director of Undergraduate Medical Education, explained the reasons why the four medical groups developed the guidelines saying that American women have been receiving conflicting advice from major health and medical organizations about how often they should have Pap tests done in order to prevent cervical cancer.

Media Image of Organized Medicine Improving

Media attitudes toward the American Medical Association seem to be softening in recognition of its leadership role as patient and physician advocate. The increase in "good press" apparently is an unexpected outcome of the January 13th press conference where the AMA/Specialty Society Project unveiled its plan to establish fault-based state administrative systems as a more beneficial avenue for resolving patient medical injury disputes.

A prominent science writer with a leading newspaper admitted that he previously had been unsympathetic to the AMA in his 10 years as a medical writer but that his attitude has changed during recent years because of the Association's forthright stance on physician responsibility to treat AIDS patients and also because of AMA's prompt fulfillment of his many requests for needed background and other information on public issues.

The Washington Post's Victor Cohn, a veteran medical writer, said that organized medicine seemed to have too much legislative influence when he embarked on his career 30 years ago. "Bills affecting medicine were...then...routinely reviewed by the state medical society," he said. "Those endorsed were passed, and those not endorsed didn't make it." Now the reverse seems to be the case, Cohn said. Organized medicine now seems to have too little influence, and this could hurt patients, he concluded.

In their news accounts individual reporters frequently highlighted differing features of the AMA/Specialty professional liability proposal. The *United Press International*, referring to a statement about the costs of the reform system by James S. Todd, M.D., commented, "Todd said he was not certain that the total cost of the system would be any less, and said he did not care if it was more expensive if the outcome was fairer to patients." That point was also underscored on the MacNeil-Lehrer television news program to the consternation of guest Eugene I. Pavalon, President of the American Trial Lawyers Association, who insisted in his joint interview with Dr. Todd that the current court system gives patients greater access to equity. Dr. Todd countered by emphasizing that the proposal would compensate greater numbers of injured patients with small claims - those not likely to attract contingency-fee attorneys.

Alternative Delivery System Videotape Available

Alternative Delivery Systems Contracting: Insights, Risks and Opportunities, a 90-minute videotape of a recent video conference, explores the contract negotiation process with alternative delivery systems (ADS). Lawyers, physicians, and ADS administrators share their experiences and answer physician questions about contracting.

The videotape can help physicians recognize, understand, analyze, and modify clauses in ADS contracts that may influence the way the physician chooses to practice medicine. Special emphasis is placed on patient care and the physician's standard of care.

For more information, call the American Medical Association at 1 (800) 621-8335.

Morgan Smith, M.D. 1868 - 1935

Thomas A. Bruce, M.D.*

Morgan Smith was born in El Dorado, Arkansas, on March 8, 1868 the son of J. Monroe and M. Josephine (Morgan) Smith; his father was a planter and state senator with considerable influence in Union County and South Arkansas.

Morgan graduated from the A.I.U. Medical Department in 1889 and returned to Union County where he married Henri Ellen Schulenberger in 1890; no children were born of this union. In 1896 they moved from Hillsboro to El Dorado where he established an extensive medical practice and was broadly engaged in civil affairs. In 1904 at the completion of a year's postgraduate training at the Tulane Medical School (he had extra training in Pediatrics and was awarded a second M.D. degree), Dr. Smith and his wife moved to Little Rock. Reopening his practice, he joined the Medical Department faculty as an Instructor in Physiology and was active in the Rockefeller Sanitary Commission to eradicate hookworm in the state. Because of his engaging personality, solid professional reputation and standing within the Medical Society, Dean Lenow encouraged him to solicit a legislative appropriation. In 1907 he became Secretary of the Medical Society and Editor of its *Journal*; from those influential positions he campaigned for a merger of the two medical schools that might pave the way for a more favorable response from the legislature. In 1911 he moved to President of the Arkansas Medical Society and two years later was elected Dean to replace Drs. Lenow and Runyan in the integrated but now demoralized school.

According to historian David Baird, Dr. Smith was charming, sympathetic, ethical, humorous, adept at repartee and wholly abstemious. His personal credo to medical students was: "rise early, go to bed early, live close to Nature, have high ideals, take less medicine and more advice". In his first days he persuaded the Univer-



sity Board of Trustees to rescind their stipulation that the first two years of medical school have to be taken on the Fayetteville campus. He then persuaded Governor Donaghey to allow the medical school to move its teaching laboratories into the east wing of the Old Statehouse, abandoned in 1911 when state offices were moved to the new capitol building. This, in turn, allowed the second medical school building (Second and Sherman Streets) and the adjacent Logan H. Roots Hospital to be renovated for additional classroom and Folsom Clinic space. Five full-time basic science faculty positions were established in 1913 and a modicum of scientific research was begun. The curriculum was strengthened although the last two years of clinical instruction remained weak; summer programs were initiated to allow refresher courses for practicing physicians. Library holdings were increased modestly. The clinical pathology lab was integrated with that of the State Board of Health, and in so doing developed broad new resources and a large volume of specimens. Dr. Smith celebrated October 7th as

*Program Director, W. K. Kellogg Foundation, 400 North Avenue, Battle Creek, Michigan 49017-3398. Reprinted with permission from *Historical Perspectives, The College of Medicine at the Sesquicentennial*, Max L. Baker, Ph.D., editor.

THE UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES - AREA HEALTH EDUCATION CENTER, FORT SMITH, ARKANSAS, has an opening for a full-time faculty member. The successful candidate will have practice experience or have completed an accredited residency training program and will be eligible for OB privileges.

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BRIEF SUMMARY

CONTRAINDICATIONS

There are no known contraindications to the use of sucralfate.

PRECAUTIONS

Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

Drug Interactions: Animal studies have shown that the simultaneous administration of CARAFATE with tetracycline, phenytoin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. The clinical significance of these animal studies is yet to be defined.

Carcinogenesis, Mutagenesis, Impairment of Fertility: No evidence of drug-related tumorigenicity was found in chronic oral toxicity studies of 24 months' duration conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies have not been conducted.

Pregnancy: Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients, adverse effects were reported in 121 (4.7%). Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

DOSAGE AND ADMINISTRATION

The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

HOW SUPPLIED

CARAFATE (sucralfate) 1-gm pink tablets are supplied in bottles of 100 and in Unit Dose Identification Paks of 100. The tablets are embossed with MARION/1712. Issued 3/84

References:

1. Grossman MI: *Scand J Gastroenterol* 58 (suppl 15):7-16, 1980.
2. Marks IN, in Hellemans J, Vantrappen G (eds): *Gastrointestinal Tract Disorders in the Elderly*. Edinburgh, Churchill Livingstone, 70-81, 1984.
3. Krentz K, Jablonowski H, in Hellemans J, Vantrappen G (eds): *Gastrointestinal Tract Disorders in the Elderly*. Edinburgh, Churchill Livingstone, 62-69, 1984.



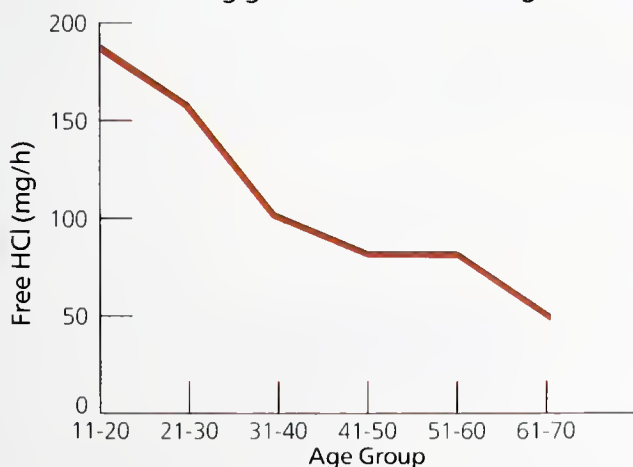
Specialized ulcer therapy

When advancing age signals reduced acid secretion



If your duodenal ulcer patient is over 55, decreased mucosal resistance is more likely to cause an ulcer than hypersecretion of acid-pepsin.¹ A tendency toward lower acid secretion with advancing age has been shown.^{2,3}

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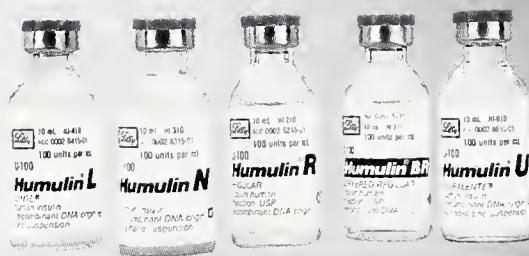
The clinical significance of insulin antibodies in the complications of diabetes is uncertain at this time. However, high antibody titers have been shown to decrease the small amounts of endogenous insulin secretion some insulin users still have. The lower immunogenicity of Humulin has been shown to result in lower insulin antibody titers; thus, Humulin may help to prolong endogenous insulin production in some patients.

Any change of insulin should be made cautiously and only under medical supervision. Changes in refinement, purity, strength, brand (manufacturer), type (regular, NPH, Lente®, etc), species/source (beef, pork, beef-pork, or human), and/or method of manufacture (recombinant DNA versus animal-source insulin) may result in the need for a change in dosage.

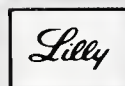
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Founder's Day and organized the Bentley-Dibrell Medical Society to promote student professionalism.

When in 1914 the AMA Council on Medical Education insisted that all Class A medical schools require at least one year of college preparation for the study of medicine (they increased the requirement to two years in 1918), Dean Smith agreed for the University of Arkansas (listed as a Class B school from the time of the Flexner Report) to comply. The results were disastrous; the next year only seven students enrolled, in spite of the fact that the Dean had initiated a pre-med year at the Little Rock school. In total frustration, he submitted his resignation.

President Futral and the Trustees prevailed on Dr. Smith to continue, and he began construction of a new Isaac Folsom Clinic and launched another campaign to get the legislature to build a charity teaching hospital (to be named the David O. Dodd Hospital, after the boy hero of the Confederacy). Under heavy lobbying the General Assembly approved such a bill in 1917, but provided no funds other than income from the sale of 36 acres of state land. World War I intervened soon thereafter, and students and staff departed to participate in the fighting; there was thus no realistic hope that a hospital could be started. In 1919, recognizing the inadequacy of patient instruction, Dean Smith discontinued the clinical years and instituted a two year program of preclinical studies only; this resulted in a Class A designation by the AMA Council. He began working assiduously to develop

adequate clinical facilities, and was able to reach agreement with St. Vincent, St. Luke and Baptist Hospitals, plus in 1924 the newly completed Little Rock City Hospital, that their facilities could be used in a teaching capacity. Clinical instruction resumed in the Fall of 1922. After a virulent personal attack on him in the 1923 General Assembly for ignoring the needs of the rural communities of the state, Dean Smith resigned again in despair. When no one could be found to accept the deanship by a year later, he agreed to resume his tasks and the Trustees concurred in the reappointment.

In the 1925 legislative session Dean Smith and Governor McRae secured passage of a bill to set aside \$500,000 for construction of a teaching hospital over a ten year period, provided private matching funds could be secured. Expected support from the Rockefeller Foundation never materialized, and some of the basic sciences faculty became increasingly skeptical of the school's leadership. When in 1927 the legislators transferred the hospital construction funds to the penitentiary, Dr. Smith tendered his resignation for the third and final time.

Re-established in private practice in 1928, he built anew his ties with the State Medical Society. He became Superintendent of Health and even was elected to the legislative body that had stymied him, serving in 1929, 1931 and 1933. Under his leadership the Arkansas Pediatric Society was organized a few months before his death on September 14, 1935.

Copies of Historical Perspectives can be obtained free of charge from Ms. Janice Honeycutt, Arkansas Caduceus Club, 4301 West Markham, Little Rock, Arkansas 72205; (501) 663-1975.

NEWSMAKERS

G. Thomas, Jansen, M.D., of Little Rock, has been elected as President of the American Academy of Dermatology. Dr. Jansen is a former professor and chairman of the Department of Dermatology at the University of Arkansas for Medical Sciences.

The new director of the AHEC South Arkansas Family Practice Residency Program is **Dr. Peter H. Carroll** of El Dorado. Dr. Carroll had served as Interim Program Director since July 1, 1987. Prior to his appointment as program director, Dr. Carroll served five years as assistant program director.

Robert Kleinhenz, M.D., **Robert McCrary, Jr., M.D.**, and **Richard Gardial, M.D.**, have been elected to serve as

the 1988 chief of staff, vice chief of staff and medical staff secretary, respectively, of AMI National Park Medical Center. The three physicians reside in Hot Springs. Kleinhenz is an orthopaedist and McCrary is board certified in internal medicine and nephrology. Gardial is a family practitioner and a diplomate of the AAFP.

Dr. Kenneth A. Martin, of Pine Bluff, and **Dr. Michael S. Wolfe**, of Fort Smith, were recently inducted as Fellows of the American Academy of Orthopaedic Surgeons during ceremonies at the association's 55th annual meeting in Atlanta, Georgia.

The 1988 chief of medical staff of Sparks Regional Medical Center is **Dr. J. David Staggs**. Dr. Staggs is an

internist practicing with Drs. Steven Edmondson and Stephen Parker in Fort Smith.

Dr. Richard Hayes is the new Chief of Staff at Rebsamen Hospital, the Jacksonville Hospital Commission recently announced. Dr. Hayes, a family practitioner, was the vice chief of staff last year.

Mark C. Stripling, M.D., a Jonesboro obstetrician and gynecologist, recently received a certificate and prize money for his paper on the "Laparoscopic Appearance of

Endometriosis." Dr. Stripling presented the paper at the World Congress and American Association of Gynecological Laparoscopists. Dr. Stripling is a new member of the Arkansas Medical Society and the Craighead-Poinsett County Medical Society.

The new director of the Area Health Education Center, Texarkana, is **Dr. Herbert B. Wren**, a Texarkana surgeon. Dr. Wren is board certified in general and thoracic surgery and will be responsible for overseeing the medical educational program in southwest Arkansas.

NEW MEMBERS

BAXTER COUNTY MEDICAL SOCIETY

Douglas, Donald S., Pathology, Mountain Home. Born February 9, 1943, Mulberry, AR. Pre-medical education, University of Arkansas, 1968. Medical education, University of Arkansas for Medical Sciences, 1968. Internship/Residency, U.S. Naval Hospital, Oakland, CA. Military record, 9 years, U. S. Navy Medical Corp. Practice experience, 12 years, Mountain Home. Board certified, Pathology. Member, ASCP - CAP.

Turner, Frederick C., Internal Medicine, Mountain Home. Born March 14, 1942, New London, CT. Pre-medical education, Providence College, B.A., 1964. Medical education, University of Texas, Galveston, 1968. Internship/residency, University of Missouri Medical Center. Military record, 2 years, U. S. Navy Reserve. Teaching appointments, Instructor and Assistant Professor, University of Missouri. Board certified, Internal Medicine. Member, ASGE, American College of Physicians.

Callaway, Jody C., Obstetrics and Gynecology, Mountain Home. Born January 30, 1956, Little Rock. Pre-medical education, University of Arkansas, Fayetteville, B.A., 1978. Medical education, University of Arkansas for Medical Sciences, 1983. Internship/residency, Louisiana State University Medical Center, Shreveport. Board eligible. Member, ACOG (Junior Fellow).

CRAIGHEAD-POINSETT COUNTY MEDICAL SOCIETY

Price III, Herbert H., Psychiatry, Jonesboro. Born July 14, 1953, Fort Lee, Virginia. Pre-medical education, University of Arkansas, Fayetteville, B.A., 1975. Medical

education, University of Arkansas for Medical Sciences, Internship/residency, Eisenhower Army Medical Center, Augusta, GA. Military record, 4 years, U. S. Army. Practice experience, 4 years, West Germany; 1 year, Jonesboro. Board certified, Psychiatry. Member, AMA, American Psychiatric Association.

Pyle, David, Internal Medicine, Jonesboro. Born April 19, 1957, California. Pre-medical education, Arkansas State University, 1979. Medical education, University of Arkansas for Medical Sciences, 1983. Internship/residency, UAMS, Baptist Memorial Hospital. Board certified, Internal Medicine. Member, ACP, AMA.

GARLAND COUNTY MEDICAL SOCIETY

Lacey, Michael G., Pathology, Hot Springs. Born June 12, 1955, St. Charles, MO. Pre-medical education, Creighton University, Omaha, NE, B.S., 1977. Medical education Creighton University, 1981. Residency, University of Wisconsin Hospital, Madison. Practice experience, New Port Richey, FL, 1 year; Hot Springs, 2 years. Board certified, Pathology. Member, CAP.

OUACHITA COUNTY MEDICAL SOCIETY

Forward, Robert B., Diagnostic Radiology, Camden. Born April 15, 1936, Calgary, Alberta, Canada. Pre-medical education, PreMed University of Toronto, 1957. Medical education, University of Toronto, 1960. Internship, Toronto General Hospital. Residency (Internal Medicine and Diagnostic Radiology), Kingston General Hospital, Kingston, Ontario. Practice experience, 26 years. Board certified.

WHITE COUNTY MEDICAL SOCIETY

Asbury, Dale W., Family Practice, Searcy. Born October 1, 1954, Fort Worth, TX. Pre-medical education, University of Arkansas, Fayetteville, B.S., 1977. Medical education, University of Arkansas for Medical Sciences, 1982. Internship/residency, Dewitt Army Hospital, Ft. Belvoir, VA. Military record, 5 years, U. S. Army Medical Corp. Practice experience, 3 years, Ft.

Sill, OK; 1 year, Searcy. Board certified, Family Practice. Member, AAFP.

RESIDENT MEMBERS

Hester, Roland A., Orthopaedics. Born July 22, 1960, Montgomery AL. Pre-medical education, University of Alabama, B.S. Medical school, Vanderbilt University, 1986.

IN MEMORIAM

DR. SAMUEL BERRY THOMPSON

Samuel Berry Thompson, 72, a retired orthopedic surgeon, died January 27, 1988. Dr. Thompson resided in Little Rock.

Dr. Thompson founded the T.C.S. Orthopedic Clinic and had been the chief of surgery at Baptist Medical Center, chief of staff and chief of orthopedics at Arkansas Children's Hospital, and chief of staff at St. Vincent Informary Medical Center.

He was a past president of the Pulaski County Medical Society and the Arkansas Orthopedic Society as well as a member of the Arkansas Medical Society. He was a councilor for the American Academy of Orthopedic Surgeons, diplomate of the American Board of Orthopedic Surgery, and fellow of the American College of Surgeons and the American Academy of Orthopedic Surgeons.

Dr. Thompson was involved with volunteer and civic groups including the United Cerebral Palsy Association .

Survivors are his wife, Evelyn Kehs Thompson; three sons, Dr. Samuel B. Thompson, Jr., Little Rock, Ronald W. Thompson of Fort Worth and Alan K. Thompson of Farmington (Washington Cnty.), and six grandchildren.

DR. MATTHIAS A. BALTZ

Matthias Anthony Baltz, M.D., a retired Pocahontas physician, died February 2, 1988. Dr. Baltz was 84.

After receiving his degree from the University of Arkansas in 1929, Dr. Baltz began his practice in Pocahontas in 1931. He practiced for 51 years.

Dr. Baltz was a member of the Arkansas Medical Society and was a Fifty Year Club member, indicating over 50 years of continuous medical practice.

In 1981, Dr. Baltz was invested as a Knight of St. Gregory the Great by Bishop Andrew J. McDonald. This honor was granted by Pope John Paul II in recognition of Dr. Baltz's lifetime commitment to the Catholic Church and Christian service.

Dr. Baltz is survived by his wife, Mary Louise Baltz; six daughters, Mrs. Mary Therese Davis of Clarksville, TN, Mrs. Rita Dust, Mrs. Madeleine Throesch and Mrs. Janes Holt, all of Pocahontas, Mrs. Mildred Kueter of Jonesboro, and Mrs. Regina (Genie) Harper of Hardy; two sons, Guy R. Baltz of Little Rock, and Dr. Albert Baltz of Pocahontas; 32 grandchildren; three great-grandchildren; and a brother, A. J. Baltz, Sr., of Pocahontas.

RESOLUTIONS

WHEREAS, the membership of the Pulaski County Medical notes with sincere sorrow the recent death of an esteemed colleague, Samuel Berry Thompson, M.D., and

WHEREAS, he had been a valuable member of this Society for forty years and had served in countless positions of leadership, including serving as President in 1969, and

WHEREAS, Dr. Thompson enjoyed an enviable reputation for his devotion to the betterment of community organizations relating to his chosen field of orthopaedic surgery; be it therefore

RESOLVED, this resolution be adopted as an indication of the great respect in which he was held by his fellow members of the Society, and

RESOLVED, that a copy of this resolution be given to Dr. Thompson's family as an expression of our sincere sympathy, and

RESOLVED, that a copy be made available to the *Journal of the Arkansas Medical Society* for publication

Adopted Unanimously
Membership Meeting
February 2, 1988

John D. Pike, Chairman
Memorials Committee

WHEREAS, the members of the Ashley County Medical Society notes with extreme sorrow the recent death of Lawrence E. Edwards, M.D., a longstanding member and friend, and

WHEREAS, Dr. Edwards was a member in good standing with the Society for thirty-four years, and

WHEREAS, he had actively practiced in Crossett from 1953 to 1973, and then in Shalimar, Florida from 1973 to the time of his death, and

WHEREAS, Dr. Edwards was known as a doctor of great compassion, whose concern and care of his patients came before his own personal needs; now therefore be it

RESOLVED, by the Ashley County Medical Society that the Society expresses its deepest sympathy to the family of Dr. Edwards, and further

RESOLVED, that this resolution be published in the *Journal of the Arkansas Medical Society*.

Adopted Unanimously by the Ashley County Medical Society, February 9, 1988

Memorials honoring Arkansas Medical Society members and their families can be made to the Medical Education Foundation for Arkansas (MEFFA), Post Office Box 5776, Little Rock, Arkansas 72215.

EMERGENCY PHYSICIAN POSITIONS AVAILABLE

**CENTRAL ARKANSAS AREA
Full or Parttime
Flexible Scheduling**

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#8 Shackleford Plaza, Suite 310
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(501) 224-5955**

**Les Sessions, M.D.
President**

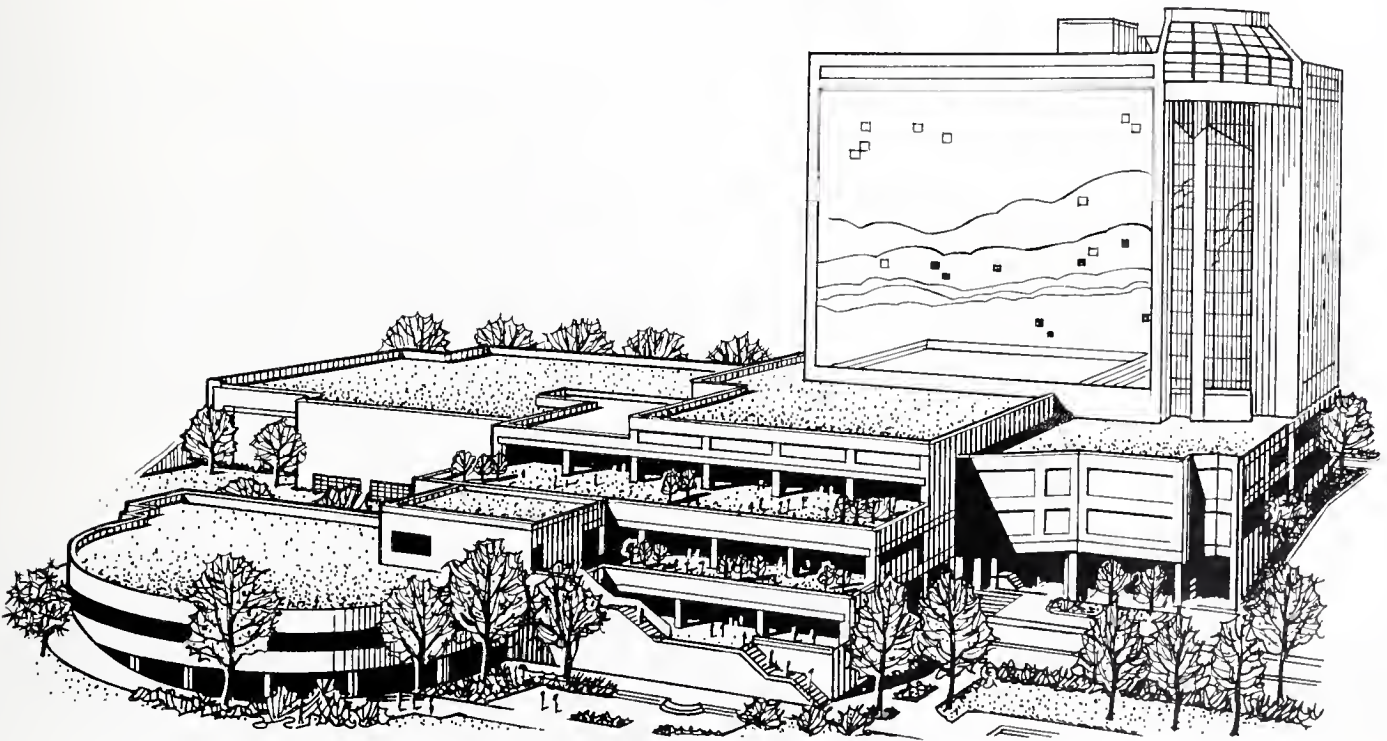
WANTED

M.D. interested in sharing clinic with G.P. with possible long-range plans to purchase real estate and equipment. A very attractive deal for young, energetic physician.

Building arranged for complete privacy. Share lab, x-ray, ECG and physiotherapy. Set-up for any specialty.

Call (501) 452-1133 evenings; (501) 783-4014 9 a.m. - 5 p.m. Confidential, 623 South 21st Street, Fort Smith, AR 72901.

112TH ANNUAL SESSION ARKANSAS MEDICAL SOCIETY



"The Many Faces of Medical Rehabilitation"
Excelsior Hotel and Statehouse Convention Center
Little Rock, Arkansas
APRIL 22 - 24, 1988

CONVENTION OFFICIALS

CONVENTION CHAIRMAN: Glen F. Baker, M.D., Little Rock

COMMITTEE MEMBERS

Carlos Araoz, M.D., Little Rock
Jack L. Blackshear, Jr., M.D., Little Rock
John Crenshaw, M.D., Pine Bluff
Fred O. Henker, III, M.D., Little Rock
Walter O'Neal, M.D., Little Rock
F. Patrick Maloney, M.D., Little Rock
Richard O. Martin, M.D., Paragould

Merrill J. Osborne, M.D., Blytheville
Charles H. Rodgers, M.D., Little Rock
R. Stephen Tucker, M.D., Little Rock

Ex-Officio:

Mrs. Steven Clift, North Little Rock
Mrs. Juanita Valentine, North Little Rock

SUBCOMMITTEES

Scientific Program:

Walter O'Neal, M.D., Little Rock
F. Patrick Maloney, M.D., Little Rock

Scientific Exhibits:

Carlos A. Araoz, M.D., Little Rock

Social and Sports:

R. Stephen Tucker, M.D., Little Rock
Mrs. Steven Clift, North Little Rock
Mrs. Juanita Valentine, North Little Rock

Speaker Hosts:

Richard O. Martin, M.D., Paragould
Merrill J. Osborne, M.D., Blytheville

Memorial Service:

Charles H. Rodgers, M.D., Little Rock

Prayer Breakfast:

Fred O. Henker, III, M.D., Little Rock,
Chairman of the Committee on Medicine and Religion

Socioeconomic Seminar:

Jack L. Blackshear, Jr., M.D., Little Rock

Shuffield Lecture:

John Crenshaw, M.D., Pine Bluff

CONTINUING MEDICAL EDUCATION CREDIT

As an organization accredited for continuing medical education, the Arkansas Medical Society Committee on Scientific Programs certifies that this continuing medical education activity meets the criteria for 14 hours of hour-for-hour credit in Category I of the Physician's Recognition Award of the American Medical Association and 13 hours of continuing medical education credit by the American Academy of Family Physicians.

General Information

Registration

The Society's convention registration desk will be located in the Exhibit Hall of the Statehouse Convention Center (one level below the lobby of the Excelsior Hotel) on Wednesday, Thursday, and Friday. Registration on Saturday and Sunday will be held in the Foyer of the Excelsior Ballroom. The registrations hours will be:

Wednesday, April 20	3:00 p.m. - 5:00 p.m.	Exhibit Hall, Statehouse Convention Center
Thursday, April 21	8:00 a.m. - 5:00 p.m.	Exhibit Hall, Statehouse Convention Center
Friday, April 22	8:00 a.m. - 5:00 p.m.	Exhibit Hall, Statehouse Convention Center
Saturday, April 23	8:00 a.m. - 2:00 p.m.	Foyer, Excelsior Hotel
Sunday, April 24	8:00 a.m. - 11:00 a.m.	Foyer, Excelsior Hotel

Registration cards and badges will be prepared in advance for the officers of the Arkansas Medical Society, county society delegates and others who pre-register.

All members and visitors are required to register, as admission to all sessions will be by badge only. There will be a \$25 registration fee for nonmember physicians with the exception of the Joint Specialty Luncheon and the AIDS Seminar. Reservations will be requested for the luncheon but no fee is required.

Advance reservations are mandatory for Society and Auxiliary members for the Shuffield Luncheon and Murry's Dinner Theatre on Friday, the Joint Specialty Luncheon and Inaugural Banquet on Saturday, and the Prayer Breakfast and Seminar on Sunday morning.

Telephone Service

The Society will have a direct-line convention telephone operating at the Convention Center. The telephone number Wednesday, Thursday, and Friday will be 375-2433. Saturday and Sunday the number will be 375-5000, extension 3220. Members of the Society staff may be reached at these numbers during registration hours. Physicians may leave these emergency numbers with their office personnel. The telephone number for the Excelsior Hotel is 375-5000.

Early Arrivals Wine and Cheese

There will be an informal wine and cheese gathering in the balcony area of the Excelsior Hotel beginning at 6:30 p.m., April 20th, for members, their guests, and exhibitors who arrive at the convention early.

Governmental Affairs Program

Mr. Lynn Zeno, Director of the Department of Governmental Affairs, will present a program entitled "A Prescription for Political Success." The program will begin at 10:45 a.m., Thursday, April 21, immediately following the opening ceremonies. Mr. Zeno will elaborate on what Arkansas physicians and the Society can do for a successful 1989 legislative year. He will show us how to parlay our assets into political success.

Delegate and Reference Committee Luncheon

Thursday, April 21st, at 12:00 noon, the Society will host a sandwich luncheon for the new delegates to the House of Delegates and members of the Reference Committees. Speaker Amail Chudy and Vice Speaker Sybil Hart will familiarize new delegates and Reference Committee members with the procedures of the Reference Committees and the House of Delegates.

Socioeconomic Seminar

"The Future of Medicine as a Career" is the title of a program presented by I. Dodd Wilson, M.D., Dean of the University of Arkansas College of Medicine. Dr. Wilson will discuss among other things the impact that the decrease in medical school applicants is having on the practice of medicine and its future. It promises to be most informative.

Arkansas Blue Cross Blue Shield Reception

Arkansas Blue Cross Blue Shield will again sponsor a reception for all members of the Society and their guests. The reception is scheduled for 6:30 p.m., Thursday, April 21st, in the Ballroom of the Excelsior Hotel.

Murry's Dinner Playhouse

**NOT NOW,
DARLING**
A Rump



Friday evening, April 22nd, has been reserved for Murry's Dinner Playhouse. Murry's offers cocktails, a full-dinner buffet, and a hilarious play entitled "Not Now Darling". Its vintage hokum is about an assortment of would-be philanthropers in a London fur shop. It promises to be an evening of good entertainment. (Reservations will be required.)

Council Reception

American Physicians Insurance Exchange (API) will sponsor the Council Reception for members of the Society and their guests on Saturday evening, April 23rd, prior to the inaugural dinner. Officers of the Society, their spouses, and representatives of API will greet the members. The reception will begin at 6:30 p.m. in the balcony area of the Excelsior Hotel. Members are urged to attend.

Inaugural Banquet and Entertainment

Dr. John M. Hestir of DeWitt will be installed as the president of the Arkansas Medical Society during a dinner in the Ballroom of the Excelsior Hotel on Saturday, April 23rd. The current president, W. Ray Jouett of Little Rock, will serve as master of ceremonies. Dr. Hestir has chosen a group called "The Top of the Rock" for the evening's entertainment. The Top of the Rock will present a variety of well-known song and dance routines.

Presidents' Luncheon

The Society will host a luncheon at 12:00 noon on Thursday, April 21st, for physicians who have served as President of the Arkansas Medical Society. The luncheon will be held in the Josephine II Restaurant of the Excelsior Hotel.

Fifty Year Club Luncheon

The Society will host a luncheon for members of the Fifty Year Club on Saturday, April 23rd, at 12:00 noon at the Capital Hotel. The Fifty Year Club President is Gilbert Dean, M.D., of Little Rock. Physicians eligible for the Fifty Year Club this year are Drs. Max Baldrige of Heber Springs, James D. Huskins of Siloam Springs, Karlton H. Kemp of Texarkana, Gardner H. Landers of El Dorado, John D. Olson of Fort Smith, John L. Ruff of Magnolia, L. Howard Schwander of Little Rock, James T. Smith of Paris, John W. Sneed, Jr. of Conway, and William E. Thomas of Newport.

Prayer Breakfast and Symposium

The Committee on Medicine and Religion will sponsor a Prayer Breakfast on Sunday morning, April 24th, at 8:00 a.m., in the Ballroom of the Excelsior Hotel. All members of the Society and Auxiliary are invited to attend this special event.

There will be a musical program immediately following breakfast. Dr. Russell Steele will present a trumpet fanfare, "Airs for the Trumpet Based on Psalms" composed by George P. Telemann. Dr. Eugene Taylor will play a piano solo entitled "Prelude in C" by Bach. Lorene McAfee Patterson and Jean Morris will present the Liturgical Dance to St. Francis Prayer. Mrs. Frances Bowman will play a harp solo entitled, "Reverie" by Grand Jany. Dr. Jack Blackshear will sing "How Great Thou Art" while being accompanied by Dr. Taylor. Dr. Randolph Ellis will lead the closing song prayer, "God Be With You".



Immediately following the musical program there will be symposium discussing the topic "Are We our Brothers' Keeper?" This topic will be approached from the physician to physician viewpoint and the physician to patient aspect.

Symposium panel members will be Maurice Hurley, Ph.D., Moderator, Sister Margaret Vincent Blandford, Chairperson of St. Vincent Infirmary Medical Center, and George Ackerman, M.D. Audience participation is welcome during this presentation.

Memorial Service

A joint Arkansas Medical Society/Auxiliary Memorial Service will be held at 10:30 a.m. on Sunday, April 24th, in the Excelsior Hotel. The program will include readings from the Scriptures by Dr. Ray Jouett and Mrs. James Gardner. Dr. Doug Smith will read the following poem which was written by his grandfather, William McCullough Smith, M.D., and hung on the wall of his father, Dr. John McCullough Smith, for many years.

*Tis passing queer
How each New Year
Comes tumbling on us faster.
Old Time is bound
In ceaseless round
To make us own him master.*



*Yet Time's swift pace
Our age shall grace
Nor evil shall befall us,
If standing strong
Against the wrong
We wait til God shall call us.*

The Lord's Prayer will be led by Dr. J. Larry Lawson. Dr. John Hestir will read the Litany and list of the Society members who have died during the last year. Names of the deceased members of the Auxiliary will be read by Mrs. Ray Jouett. A solo, "Jesu Joy of Man's Desiring" by J. S. Bach will be sung by Dr. Jack L. Blackshear with Mrs. Frances Bowman accompanying him on the harp. Dr. Hestir will give the Benediction.

Members of the Society and Auxiliary who have died during the past year are listed below.

Society Members

Matthias Anthony Baltz, Pocahontas
Charles G. Clark, Arkadelphia
Charles S. Cunningham, Poteau, Oklahoma
Lawrence E. Edwards, Niceville, Florida
John C. Gilliland, Jr., Fort Smith
Richard F. Graham, Hot Springs
Glenn G. Hairston, Prescott
Richard A. Hinkle, Quitman
William J. Jones, Glenwood
Kay M. Kreth, Little Rock

Herbert Lanford, West Memphis
Robert F. McCrary, Sr., Hot Springs
Earle D. McKelvey, Clarksville
George T. McPhail, Little Rock
Frank E. Morgan, North Little Rock
Harold H. Short, Texarkana
Walter Shriner, Springfield, Illinois
John McCollough Smith, Little Rock
Samuel B. Thompson, Sr., Little Rock

Auxiliary Members

Mrs. Thomas Lester Adair, Bald Knob
Mrs. Frank G. Edmiston, Maumelle
Mrs. Clyde A. Lawlah, Pine Bluff

Mrs. James G. Martindale, Hope
Mrs. Ralph Edwin McLochlin, Little Rock
Mrs. Leola Shukers, Little Rock

Athletic Activities

Members of the Society and Auxiliary who may be interested in playing golf at the Pleasant Valley Country Club during the annual session may contact Z. Lynn Zeno at the Society office at 224-8967 for details.

Members who are interested in playing tennis may use the facilities of the Westside Tennis and Fitness Center. Arrangements should be made by calling the center and informing them you are a part of the AMS convention. Their telephone number is 227-4242.

The Excelsior Health Club facilities are also available for hotel registrants. Arrangements should be made directly through the club at the hotel.

Business Session

Meetings of the Council

The Council of the Arkansas Medical Society will meet daily during the convention at times listed below. All meetings will be held in the Excelsior Hotel.

Thursday, April 21	8:30 a.m.	Breakfast meeting
Friday, April 22	7:30 a.m.	Breakfast meeting
Saturday, April 23	8:00 a.m.	Breakfast meeting
Sunday, April 24	7:30 a.m.	Business meeting
Sunday, April 24	Immediately following adjournment of the House of Delegates (brief reorganizational meeting and group photograph of new officers)	

The voting members of the Council are: the councilors, the president, the first vice president, president-elect, secretary, treasurer, and immediate past president. The speaker, vice speaker, and other past presidents are members ex-officio without vote.

House of Delegates

The opening session of the House of Delegates of the Arkansas Medical Society will begin at 1:00 p.m. on Thursday, April 21st. Speaker of the House Amail Chudy, M.D., will preside, assisted by Vice Speaker Sybil Hart, M.D.

All items of business to be considered by the House must either be printed in the March issue of the Journal or submitted to the headquarters office in writing twenty days prior to the meeting. Any new business proposed during the sessions of the House of Delegates must have a two-thirds vote of attending delegates for introduction.

Items of business will be referred by the Speaker of the House of Delegates to one of two reference committees. Opening hearings on those items of business will be held by the reference committees following the first session of the House on Thursday. All members of the Society are welcome to attend the meetings of the reference committees and to express views on the various reports, resolutions, etc.

AGENDA FIRST MEETING, HOUSE OF DELEGATES 1:00 p.m., Thursday, April 21 Amail Chudy, M.D., Speaker Sybil Hart, M.D., Vice Speaker



William S. Hotchkiss, M.D.
President
American Medical Association

1. Call to Order
2. Introduction of Guests:
 - Mrs. James Gardner, Hot Springs, President of the Arkansas Medical Society, Auxiliary
 - Mrs. Ray Jouett, Little Rock, President-elect of the Arkansas Medical Society Auxiliary
 - Mrs. Gary Strebel, AMA Auxiliary Legislative Chairman, Oklahoma City, Oklahoma
3. William S. Hotchkiss, M.D., President, American Medical Association, Chesapeake, Virginia
4. Adoption of minutes of the 111th Annual Session as published in the June 1987 issue of *The Journal of the Arkansas Medical Society*.
5. Adoption of minutes of House session held October 4, 1987, as published in the November 1987 issue of *The Journal of the Arkansas Medical Society*.

6. New Business - Committee Reports and Resolutions
7. Announcement of Vacancies on State Boards
 - (A) Arkansas State Board of Health (vacancy - Congressional Districts 1 and 5)
 - (B) Arkansas State Medical Board (vacancy - Congressional District 1)
8. Recess until Sunday

AGENDA
FINAL MEETING, HOUSE OF DELEGATES
11:00 a.m., Sunday, April 24
Presiding: Amail Chudy, M.D., Speaker
Sybil Hart, M.D., Vice Speaker

1. Call to Order
2. Address by the Past President of the Arkansas Medical Society, W. Ray Jouett, M.D., Little Rock
3. Election (See Nominating Committee Report)
4. Reports of Reference Committees
5. Supplemental Report of Council covering convention meetings, J. Larry Lawson, M.D., Chairman
6. New Business
 - (A) State Board of Health (1st District, 5th District)
 - (B) Arkansas State Medical Board (1st District)
7. Adjournment

Reference Committees

Reference Committees are appointed by the Speaker of the House of Delegates to consider the various reports and resolutions. Reports published in the March issue of the *Journal*, as well as any reports and resolutions presented at the first meeting of the House on April 21st, will be referred by the Speaker to the reference committees. The committees hold open hearings immediately following the House of Delegates session on Thursday. After the open hearings, the reference committees will hold executive sessions for the purpose of preparing recommendations and reports for the House of Delegates. Reports of the Reference Committees will be acted upon by the House of Delegates at the Sunday session. Reference Committee members are as follows:

Reference Committee #1: Charles Logan, Chairman, Little Rock; George V. Roberson, Jr., Pine Bluff; Kelsy J. Caplinger, III, Little Rock; Paul M. Anderson, Fort Smith; Paul A. Wallick, Monticello; and Kyle McAlister, Little Rock, Medical Student Observer.

Reference Committee #2: James Armstrong, Ashdown, Chairman; Robert F. Shannon, Little Rock; Milton D. Deneke, West Memphis; Raymond N. Bowman, El Dorado; Earl B. Riddick, Jr., Fayetteville; Morton C. Wilson, Fort Smith; and Steve Hathcock, Little Rock, Medical Student Observer; Matthew Garner, Little Rock, Medical Student Alternate.

State Board Vacancies

Arkansas State Board of Health

Vacancies will occur December 31, 1988, in the First and Fifth Congressional District positions on the Arkansas State Board of Health. The term of office will be for four years and three nominees are required for each position. Those presently serving are eligible for reappointment.

Members from the counties in the First and Fifth Congressional Districts will meet to select nominees for the Board positions. The meetings will be held by districts immediately following adjournment of the House of Delegates session on Thursday. Members presently serving on the Board and the counties in the districts are:

First District: Don Vollman, Jr., Jonesboro. Counties in First District: Clay, Craighead, Crittenden, Cross, Greene, Lee, Mississippi, Phillips, Poinsett, and St. Francis.

Fifth District: James Maupin, Dardanelle. Counties in Fifth District: Conway, Faulkner, Perry, Pope, Pulaski, Yell

Arkansas State Medical Board

A vacancy will occur in the First Congressional District position on the Arkansas State Medical Board on December 31, 1988. Members from the counties in the district are urged to meet immediately following adjournment of the House of Delegates meeting on Thursday to vote for nominees. The term of office will be for eight years. Nominations should be reported to the Society personnel at the convention registration desk (only one nomination is required).

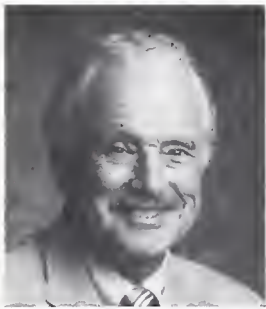
B. P. Raney of Jonesboro is currently serving the term which will expire in December. He is eligible to succeed himself.

Counties in the First Congressional District are Clay, Craighead, Crittenden, Cross, Greene, Lee, Mississippi, Phillips, Poinsett, and St. Francis.

Other Meetings

The Arkansas State Board of Health will hold a luncheon meeting at 12:00 noon on Friday, April 22nd, in the Excelsior Hotel.

The Arkansas State Medical Board will hold a meeting at 9:00 a.m., Thursday, April 21st, and Friday, April 22nd, in the Fulton Room of the Statehouse Convention Center.



G. Douglas Talbott, M.D.
Program Director, Ridgeview Institute
Smyrna, Georgia

General Scientific Program

"The Many Faces of Medical Rehabilitation"



Sam Nixon, M.D.
University of Texas
Houston, Texas

Friday, April 22

- 8:30 a.m. Rehabilitation of Chronic Progressive Disorders
 F. Patrick Maloney, M.D., Professor and Head, Division of Rehabilitation Medicine, University of Arkansas for Medical Sciences and Chief, Rehabilitation Medical Service, John L. McClellan Veterans Administration Medical Center, Little Rock
- 9:10 a.m. Inter-Disciplinary Rehabilitation of the Arthritic Patient
 R. Barry Sorrells, M.D., Little Rock
- 9:50 a.m. Impact of Mandated Scoliosis School Screening on Medical Practice in Arkansas
 Richard E. McCarthy, M.D., Head, Children's Orthopaedic and Associate Professor, Arkansas Children's Hospital, Little Rock
- 11:00 a.m. The Rehabilitative Approach to the Patient with Myocardial Infarction
 Jo Etta Galbraith, M.D., Little Rock
- 1:30 p.m. Alcohol and Drug Rehabilitation
 G. Douglas Talbott, M.D., Program Director, Adult and Adolescent Chemical Dependency Programs, Ridgeview Institute; Clinical Professor, Department of Psychiatry, Emory School of Medicine, Smyrna, Georgia
- 2:15 p.m. Blind Rehabilitation
 Mr. Buddy Spivey, Visual Impairment Services Coordinator, John L. McClellan Veterans Administration Medical Center, Little Rock
 William Jacobson, Ph.D., Associate Professor and Coordinator of Rehabilitation Personnel Programs, University of Arkansas at Little Rock
- 3:30 p.m. Early Identification and Habilitation Service
 Vikki Stefans, M.D., Division of Rehabilitation Medicine and Department of Pediatrics, Board Certified, Pediatrics and Physical Medicine and Rehabilitation, Arkansas Children's Hospital, Little Rock

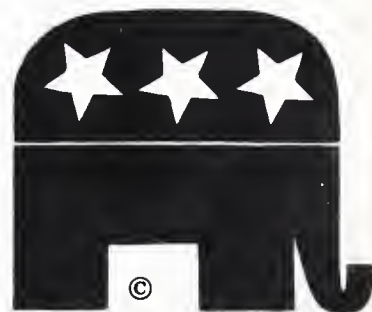
- 4:15 p.m. Sex and Aging
 Sam Nixon, M.D., Director of the Division of Continuing Medical Education, University of Texas
 Health Sciences Center, Houston, Texas

Saturday, April 23

- 9:00 a.m. Chronic Low Back Pain and Psychological Aspects of Disabling Pain
 Warren Boop, M.D., University of Arkansas for Medical Sciences, Little Rock
 Gary T. Souheaver, Ph.D., Little Rock
- 12:00 noon **Joint Specialty Luncheon - AIDS 1988**
 R. Neal Boswell, M.D., Colonel, Lackland Air Force Base, Texas
- 1:30 p.m. **The Management of HIV Infections and AIDS**
An Overview of AIDS and the Function of the Arkansas Medical Society's Committee on AIDS
 William N. Jones, M.D., Chairman, Arkansas Medical Society Committee on AIDS, Little Rock;
 Associate Clinical Professor of Dermatology, University of Arkansas for Medical Sciences
Arkansas Statistics
 J. P. Lofgren, M.D., Medical Director AIDS/STD Program, Arkansas Department of Health,
 Little Rock
Management of HIV Early Infections
 Linda A. Markland, M.D., Associate Professor, Department of Family and Community Medicine,
 AHEC Northwest, Fayetteville
Use of Zidovudine "AZT"
 Daniel Barbaro, M.D., Assistant Professor, Infectious Diseases, University of Texas, Southwestern
 Branch; Director of the AIDS Clinic, Parkland Hospital, Dallas-Fort Worth, Texas
Use of Inhaled Pentamidine
 William Mason, M.D., Pulmonologist Medical Director, St. Vincent Lung Center, Clinical Assistant
 Professor, University of Arkansas for Medical Sciences, Little Rock
 April Jackson, R.N., M.S.N., Pulmonary Clinical Nurse Specialist, St. Vincent Infirmary Medical
 Center, Little Rock
Panel Discussion
 William N. Jones, M.D., Moderator, Little Rock
 Daniel Barbaro, M.D., Dallas-Fort Worth, Texas
 William Mason, M.D., Little Rock
 Linda A. Markland, M.D., Fayetteville
 E. Clinton Texter, Jr., M.D., Levy Professor of Medicine, Professor of Physiology and Biophysics,
 University of Arkansas for Medical Sciences, Little Rock
 April Jackson, R.N., M.S.N., Little Rock
 Sam Nixon, M.D., Director of the Division of Continuing Medical Education, University of Texas
 Health Sciences Center, Houston, Texas
 R. Neal Boswell, M.D., Lackland Air Force Base, Texas



Shuffield Lecture Society/Auxiliary Political Luncheon *"Reflections on the 1988 Presidential Elections"*



With the passing of "Super Tuesday" and the completion of most of the individual state primaries, the field for the 1988 Presidential Elections should be narrowed by the time our annual session rolls around. Lib Carlisle, Chairman of the Democratic Party of Arkansas, and Dorothy English, Executive Director of the Republican Party of Arkansas, will be our special guests. These party leaders will discuss the upcoming elections, provide insight into the selection process, and outline the strategies they think will bring about victory for their candidates in November.

This special political presentation will be featured at the annual Shuffield Lecture at 12:00 noon on Friday, April 22, 1988. Future mailings will provide ticket reservation information and all Society members and Auxilians are encouraged to attend.

Group Specialty Meetings

The **Arkansas Society of Anesthesiologists** will meet on Saturday, April 23rd, at 11:00 a.m. Mr. David Wroten, Assistant Executive Vice President of the Arkansas Medical Society, will be the guest speaker.

The **Arkansas Academy of Family Physicians** will meet on Saturday, April 23rd, from 10:30 a.m. until 12:00 noon and then will participate in the Joint Specialty Luncheon. Sam Nixon, M.D., Director of the Division of Continuing Medical Education at the University of Texas, will speak about "What About the Other STD's?".

The **Arkansas Chapter of the American Society of Internal Medicine** will meet on Saturday, April 23rd, from 10:30 a.m. until 12:00 noon, and will participate in the Joint Specialty Luncheon. Mr. Paul L. Herndon, Director of Medical Practice Activities of the American Society of Internal Medicine, will discuss "Increasing Office Efficiency: Successful Management Strategies for Physicians".

The **Arkansas Ophthalmological Society** will meet on Saturday, April 23rd, from 8:30 a.m. until 12:00 noon. The meeting will begin with a business session and Tom Friberg, M.D., Director of the Department of Ophthalmology at the University of Pittsburgh School of Medicine, will speak on the topic of "Retina Diseases." Members of the Ophthalmological Society will join other society members at the Joint Specialty Luncheon.

The **Arkansas Chapter of the American Otolaryngology Society** will meet on Saturday, April 23rd, from 9:00 a.m. until 12:00 noon and then participate in the Joint Specialty Luncheon.

The **Arkansas Society of Pathologists** will meet on Saturday, April 23rd, from 10:30 a.m. until 12:00 noon and will participate in the Joint Specialty Luncheon.

The **Arkansas Society of Plastic and Reconstructive Surgeons** will meet on Saturday, April 23rd, from 10:30 a.m. until 12:00 noon.

The **Arkansas Chapter of the American College of Radiology** will meet on Saturday, April 23rd. The Executive Committee will meet at 10:00 a.m. and a general business meeting will follow from 10:30 a.m. until 12:00 noon.

The **Arkansas Urological Society** will meet on Saturday, April 23rd, at 11:00 a.m. with a luncheon beginning at 11:45 a.m. Dr. Dennis Venable, Head of the Department of Urology of the Louisiana State University School of Medicine at Shreveport, will be the guest speaker for the afternoon session beginning at 1:00 p.m. A business meeting will follow.

Joint Specialty Luncheon

All specialties are invited to participate in a Joint Specialty Luncheon on Saturday, April 23rd, at 12:00 noon. R. Neal Boswell, M.D., from Lackland Air Force Base in Texas, will be our featured speaker. Dr. Boswell is an internationally known speaker and will address "AIDS - 1988". This luncheon is open to all members and interested nonmembers. Reservations are requested. National Medical Rentals will be the sponsor for the Joint Specialty Luncheon.

AIDS Seminar The Management of HIV Infections and AIDS

The Arkansas Medical Society Committee on AIDS will sponsor a half-day seminar for anyone who would like to attend. It is open to members and nonmembers. There will be no registration fee for the seminar. Featured speakers are R. Neal Boswell, M.D., Lackland Air Force Base and Daniel Barbaro, M.D., Assistant Professor, Infectious Diseases, University of Texas Southwestern Medical School and Director of the AIDS Clinic at the Parkland Hospital, Dallas-Fort Worth, Texas. Physicians who have worked closely with the AIDS Committee and AIDS patients will participate in a panel discussion.

Arkansas Medical Society Auxiliary

"GO FOR IT!"

SIXTY-FOURTH ANNUAL SESSION

April 21-24, 1988

Excelsior Hotel and Statehouse Convention Center

Little Rock, Arkansas

Registration Hours: Statehouse Convention Center

Thursday. 1:00 p.m. to 4:00 p.m.

Friday. 8:00 a.m. to 12:00 noon

Saturday. 8:00 a.m. to 10:00 a.m.

Thursday, April 21

- 2:00 p.m. Pre-Convention Board Meeting. Joint meeting for all State officers, State committee chairmen, county presidents and presidents-elect.
- 3:30 p.m. SOCIOECONOMIC SEMINAR with Arkansas Medical Society
"The Future of Medicine as a Career" I. Dodd Wilson, M.D., Dean, UAMS, Little Rock
- 6:30 p.m. Cocktail party hosted by Arkansas Blue Cross and Blue Shield

Friday, April 22

- 8:30 a.m. Continental Breakfast
- 9:00 a.m. Opening General Session
Mrs. James L. Gardner, President, presiding
Invocation: Mrs. Raymond Peebles, Chaplain
Auxiliary Pledge: All Members
"I pledge my loyalty and devotion to the Arkansas Medical Society Auxiliary. I will support its activities, protect its reputation and ever sustain its high ideals."
Introduction of Guests
Welcome: Mrs. Peter Marvin, North Little Rock
Response: Mrs. Robert G. Valentine, North Little Rock
Roll Call and Seating of Delegates
Presentation of Rules of Convention
Address by:
John M. Hestir, M.D., President-elect, Arkansas Medical Society
Ken LaMastus, Executive Vice President, Arkansas Medical Society
David Wroten, Assistant Executive Vice President, Arkansas Medical Society
Peggy Pryor Cryer, Director of Administrative Services, Arkansas Medical Society
Z. Lynn Zeno, Director, Department of Governmental Affairs
Convention Announcements: Mrs. Steven Clift, Convention Chairman
Keynote Address: Mrs. Gary Strebel, American Medical Association Auxiliary Legislation Chairman, Oklahoma City, Oklahoma
Timekeeper:
Mrs. Kemal E. Kutait, Parliamentarian
Report of Board of Directors
Reports of officers and committee chairmen
Unfinished Business
New Business
Election of the Nominating Committee
(2 from the Board; 2 from the House of Delegates)
Election of Delegates and Alternates to AMA Auxiliary Convention, Chicago
Presentation of the 1988-89 Budget
Adjournment

- 12:00 Noon Joint Luncheon with the Society - Reflections on the 1988 Presidential Elections
 Lib Carlisle, Chairman of the Democratic Party of Arkansas
 Dorothy English, Executive Director of the Republican Party of Arkansas
- 1:30 p.m. Legislative Workshop - "Strategies for Effective Legislative Activities" (Everyone invited)
 Mrs. Gary Strebel, American Medical Association Auxiliary Legislation Chairman
- 2:00 p.m. "Good Politics is Good Medicine"
 Mr. Lynn Zeno, Director, Department of Governmental Affairs, Arkansas Medical Society
- 6:30 p.m. Murry's Dinner Theatre with the Arkansas Medical Society

Saturday, April 23

- 8:00 a.m. Past Presidents' Breakfast
- 8:45 a.m. Continental Breakfast
- 9:15 a.m. Second General Session
 Mrs. James L. Gardner, President, presiding
 Invocation: Mrs. Raymond Peeples
 Auxiliary Pledge
 Roll Call and Seating of Delegates
 Reading of the Minutes of the First General Session
 Convention Announcements: Mrs. Steven Clift, Convention Chairman
 Report of Past Presidents' Breakfast: Mrs. Jerry Blaylock and Mrs. Herbert Taylor
 Introduction of Guests
 Greetings from Mrs. Graham Milburn, President, Southern Medical Association Auxiliary, Baton Rouge, Louisiana
 Reports of County Presidents: District Vice Presidents serve as moderators
 Northeast: Mrs. Merle Osborne
 Northwest: Mrs. James Burgess
 Southeast: Mrs. William Steele
 Southwest: Mrs. Paul Meredith
 Registration Committee Report: Mrs. Frank Morgan
 Unfinished Business
 New Business
 Presentation of Vinnie E. Garrison Memorial Award: Mrs. C. Lynn Harris
 Presentation of Doctors' Day Awards: Mrs. Amail Chudy
 Report of the Nominating Committee
 Mrs. Robert Valentine, Chairman
 Election of Officers
 Courtesy Resolution Committee
- 12:00 noon Luncheon at Little Rock Club
 Hostess: Pulaski County
 Invocation: Mrs. Ralph F. Joseph
 Introduction of Guests
 Installation of Officers: Mrs. John McCullough Smith
 Presentation of Past President's Pin: Mrs. Mason Lawson
 Presentation of President's Pin and Gavel by Mrs. Gardner to Mrs. Jouett
 President's Message: Mrs. Ray Jouett
 Adjournment: Mrs. Jouett
- 2:00 p.m. Post Convention Board Meeting
 All 1987-88 officers, chairmen, county presidents, and county presidents-elect are expected to attend. Mrs. Ray Jouett, President, presiding
- 6:30 p.m. Council Reception sponsored by American Physicians Insurance Exchange (API)
- 7:30 p.m. Inaugural Dinner and Entertainment

Sunday, April 24

- 8:00 a.m. Prayer Breakfast and Seminar with Arkansas Medical Society
 "Are We Our Brothers' Keeper?"
- 10:30 a.m. Society and Auxiliary Memorial Service

House of Delegates Business Affairs

New Business Nominating Committee Charles Logan, M.D., Chairman

The Nominating Committee met on October 4, 1987, immediately following the Winter Meeting of the House of Delegates and also through a conference call on December 22, 1987. We wish to present to the Society the following nominations:

President-elect: James R. Weber, M.D., Jacksonville
Charles F. Wilkins, Jr., M.D., Russellville
First Vice President: Glen F. Baker, M.D.,
Little Rock
Second Vice President: H. Aubry Talley, M.D.,
El Dorado
Third Vice President: George V. Roberson, Jr.,
M.D., Pine Bluff
Treasurer: James M. Kolb, Jr., M.D., Russellville
Secretary: Charles H. Rodgers, M.D., Little Rock
Speaker of the House: Sybil Hart, M.D., Blytheville
Vice Speaker of the House: James L. Gardner, M.D.,
Hot Springs

Councilors:

District 1: Merrill J. Osborne, M.D.,
Blytheville
District 2: John E. Bell, M.D., Searcy
District 3: L. J. Pat Bell, M.D., Helena
District 4: Paul A. Wallick, M.D., Monticello
District 5: Cal R. Sanders, M.D., Camden
District 6: James D. Armstrong, M.D.,
Ashdown
District 7: Ronald J. Bracken, M.D.,
Hot Springs
District 8: William N. Jones, M.D.,
Little Rock
David Barclay, M.D. Little Rock
Harold Purdy, M.D., Little Rock
District 9: Robert H. Langston, M.D.
Harrison
District 10: Morton C. Wilson, M.D.,
Fort Smith
Gerald A. Stolz, M.D., Russellville
Delegate to the AMA: Joe Verser, M.D., Harrisburg
A. E. Andrews, M.D.,
Texarkana
Alternate Delegate to the AMA: Richard N. Pearson,
M.D., Rogers
George W. Warren,
M.D., Smackover

Resolution by the Pulaski County Medical Society Concerning Seatbelts

WHEREAS, efforts on the part of the Arkansas Medical Society and other interested organizations to have the Arkansas General Assembly adopt a mandatory seatbelt law having thus far met with failure; and

WHEREAS, statistics for 1987 reveal that there were 630 fatalities due to highway accidents, 95% of which involved persons not wearing seatbelts; and

WHEREAS, the use of seatbelts as a deterrent to death, disabling injuries, and emotional trauma is not disputable; therefore be it

RESOLVED, that the House of Delegates of the Arkansas Medical Society reaffirm its position as strongly favoring a mandatory seatbelt law; and be it further

RESOLVED, that the Arkansas Medical Society Department of Governmental Affairs consider as one of its top priorities the passage of such legislation at the time of the next meeting of the Arkansas General Assembly.

Adopted by the membership of the Pulaski County Medical Society, February 2, 1988.

Committee on AIDS William N. Jones, M.D., Chairman

The following report covers actions of the committee through December, 1987.

The Arkansas Medical Society Committee on AIDS was organized immediately following unanimous passage of the Pulaski County Resolution on AIDS by the AMS House of Delegates on April 26, 1987. The organizational meeting of the committee was held on May 6, 1987, and since that time the committee has met on ten occasions with an average attendance of thirteen of its eighteen members present.

Members of the committee are: William N. Jones, Chairman; William L. Mason, Charles R. Henry, Tony A. Flippin, Harold H. Hedges, Glen F. Baker, Larry Ezell, James B. Adamson, A. Stuart Fitzhugh, Donald G. Browning, Eugene M. Shelby, Marlon J. Doucet, Don G. Howard, E. Clinton Texter, Linda A. Markland, J. P. Lofgren, Mr. Paul Harris and Mr. Ken LaMastus.

Between August 15th and December 15th, 1987, we held 90 educational meetings on AIDS which were attended by over 4,100 persons throughout the state. Of those participating, 1,022 were physicians and other health care workers.

It has been one year since the first draft of the AIDS resolution was composed in January, 1987. At that time,

There had been 29,000 cases and 15,000 deaths from AIDS in the United States reported to the Centers for Disease Control since 1981. As of January 4, 1988, those statistics were 50,265 cases and 28,149 deaths. In Arkansas, the corresponding figures were 40 cases and 30 deaths rising to 90 cases and 47 deaths by the end of 1987.

The epidemic is still forecast by the public health authorities to result in 274,000 cases and 179,000 deaths by 1991. It is estimated that 1.5 million persons in the United States are now infected with HIV. Education and behavior modification remain our most important tools to slow the epidemic for the foreseeable future.

To date the committee has:

Developed a basic informational program on AIDS for presentation to physicians, medical personnel, educational institutions, civic organizations, churches, and businesses throughout the state.

Conducted an AMS membership survey on AIDS

Starting with July 1987 issue of the *Journal of the Arkansas Medical Society*, published monthly educational articles on AIDS along with statistical updates on AIDS in Arkansas from materials provided by the Arkansas Department of Health.

Received a \$9,000 contract from the Arkansas Department of Health and a \$1,000 grant from Burroughs Wellcome Company for use in our educational programs.

Made numerous presentations on radio, television, and in newspapers throughout the state.

Assisted, promoted, and took part in the November 12, 1987 symposium, "Clinical Focus on AIDS", held at the University Conference Center in Little Rock. The symposium was attended by over 300 persons, 88 of whom were physicians.

During the last full session of the legislature, pre-committee effort involved early AIDS education to members of the House and Senate and other governmental officials including the Governor while they considered a premarital blood test for AIDS.

Established a liaison with and/or participated in functions of the American Medical Association, University of Arkansas for Medical Sciences, Arkansas Department of Health, Arkansas Board of Health, the AIDS Advisory Committee to the Arkansas Department of Health, Arkansas Chapter of the American Red Cross, Arkansas Department of Higher Education, Governor's Office, Legislature - both House and Senate, National Center for Toxicological Research, AIDS Foundation of Arkansas, Black Ministerial Alliance, Arkansas Sheriff's Association, Arkansas Fireman's Union, California AIDS Task Force, and various colleges, universities, churches, synagogues, and emergency medical technician groups in the state.

As to the future work of the committee, we are currently planning a seminar to be held in April as part of the spring meeting of the Medical Society in which we

will present advanced material on the diagnosis, treatment, and management of AIDS.

The committee will continue to make available speakers and materials on AIDS to all persons or groups who request assistance throughout the state. We will continue our efforts to have the Department of Education accept our long standing offer to become an integral part of the AIDS education for the children of the state.

During the next year, we will continue our involvement and input in all the agencies and state and local committees with which we have established liaison. Legislative matters and goals will be under consideration in the weeks and months ahead. Recommendations on an updated position paper on AIDS will be presented to the Position Papers Committee for their consideration.

The accomplishments of the committee to date would not have been possible without the participation of over fifty volunteer physician members of the Medical Society in taking the programs to their fellow physicians and communities around the state. The committee thanks them for their efforts and looks forward to their continued support.

I would like to thank all of the members of the committee and the staff of the Medical Society for making this such a successful effort. Laura Harrison of the Medical Society staff has been invaluable to the work of all of us on the committee and receives our special thanks. The close working relationship and mutually supportive activities of the Committee on AIDS and the Arkansas Department of Health has been extremely gratifying and also deserves our special recognition.

Committee on Aging

Joseph A. Norton, M.D., Chairman

Since there were no requests for action from the Committee on Aging, the Committee did not meet during 1987.

Annual Session Committee

Glen F. Baker, M.D., Chairman

The Annual Session Committee for 1987-88 was composed as follows: Glen F. Baker, Little Rock, Chairman; Jack L. Blackshear, Jr., Little Rock, Socioeconomic Subcommittee Chairman; Walter O'Neal, Scientific Sessions Subcommittee Chairman; F. Patrick Maloney, Little Rock, Scientific Sessions Subcommittee Co-chairman; Carlos Araoz, Little Rock, Scientific Exhibits Subcommittee Chairman; Charles H. Rodgers, Little Rock, Memorial Service Subcommittee Chairman; Fred O. Henker, III, Little Rock, Prayer Breakfast Subcommittee Chairman; John Crenshaw, Pine Bluff, Shuffield Lecture Chairman; R. Stephen Tucker, Little Rock, Social and Sports Subcommittee Chairman; Merrill J. Osborne, Blytheville, Host District Councilor; Richard O. Martin,

Paragould, Speaker Host; Mrs. Steven Clift, North Little Rock, Auxiliary Convention Chairman; and Mrs. Juanita Valentine, North Little Rock, Auxiliary Convention Co-chairman.

Meetings of the Annual Session Committee were held in September, October, and December to discuss the various aspects of the program theme, "The Many Faces of Medical Rehabilitation". This theme was chosen because it would encompass a wide variety of specialties. This year emphasis is being placed on recruiting nationally known speakers in addition to local experts.

I wish to thank each committee member for their ideas, time, and energy in working with the Arkansas Medical Society staff to organize what promises to be an excellent convention.

Budget Committee

Lloyd Langston, M.D., Chairman

The Budget Committee submitted the following budget for 1988. The complete budget, as presented to the Council, is available to members upon request.

INCOME

State Society Dues	\$685,785.00
Journal Advertising	51,300.00
Booth Income	24,000.00
Annual Session	7,500.00
AMA Reimbursement	5,500.00
Misc. & Rosters	6,000.00
Interest Income	32,000.00
Specialty Desk	1,000.00
INTRAV Reimbursement	400.00
Continuing Med. Educ.	1,000.00
Rent Income	50,894.00
AIDS Grant	<u>4,000.00</u>
	\$869,379.00

EXPENSES

Salaries	\$191,236.00
Travel & Convention	40,000.00
Presidents Travel	3,000.00
Taxes	26,200.00
Retirement	21,057.00
Stationary & Printing	10,000.00
Office Supp. & Exp.	17,500.00
Telephone & Telegraph	11,000.00
Rent	115,017.00
Postage	25,000.00
Insurance & Bonds	35,000.00
Auditing	3,500.00
Council	3,000.00

Journal Printing	50,750.00
Winter Meeting	2,500.00
Dues & Subscriptions	4,000.00
Gifts & Contributions	2,000.00
Auxiliary	1,700.00
Legal Services (Retainer)	25,200.00
Leg. Svc. Schaefer Suit	15,000.00
Special Committees	1,500.00
Miscellaneous Expenses	4,000.00
Off. Equip. & Furniture	7,500.00
Continuing Med. Educ.	500.00
Richmond Early Retirement	5,820.00
Contract Labor	500.00
Annual Session 1987	40,000.00
Resident & Student Sect.	4,500.00
AIDS Committee	<u>4,000.00</u>

\$670,980.00

Committee on Continuing Medical Education

John M. Hestir, M.D., Chairman

The Arkansas Medical Society is authorized by the Accreditation Council for Continuing Medical Education (ACCME) to accredit intrastate sponsors of continuing education for physicians. Only accredited sponsors may offer Category I Credit as required by the the American Medical Association Physician's Recognition Award. The Committee on Continuing Medical Education acts as the accrediting body within the Medical Society.

The ACCME consist of seven sponsoring organizations. These organizations are the American Board of Medical Specialties, American Hospital Association, American Medical Association, Association for Hospital Medical Education, the Association of American Medical Colleges, Council of Medical Specialty Societies, and the Federation of State Medical Boards.

In 1987, the Arkansas Medical Society's accreditation program was reviewed by the ACCME. The ACCME Review Committee made several recommendations designed to improve our program and these are currently being implemented. The end-result of some of the ACCME's recommendations will be that organizations accredited by the Medical Society will undergo closer scrutiny than in the past.

The Society currently accredits ten organizations in the state of Arkansas. These include eight hospitals, one state specialty society, and the Society's Committee on Scientific Programs. Two of the organizations underwent reaccreditation surveys in 1987 and recommendations on those programs will be presented to the full committee. Two other organizations submitted their reaccreditation applications in 1987 but have yet to schedule a survey date. Four other institutions will undergo reaccreditation during 1988.

Report of the Council

J. Larry Lawson, M.D., Chairman

The Council met on July 19, 1987, at the Holiday Inn West in Little Rock and the following business was discussed or transacted:

1. Presented Larry Lawson with a resolution honoring his daughter who was chosen Miss Arkansas for 1987.
2. Voted to approve the minutes of the Council meetings during the Annual Session (April 23-26) as written.
3. The minutes of the Executive Committee meetings and conference calls on May 5th, May 27th and June 30th were approved as follows.
 - (1) Discussed sending a letter to the Governor requested by the House of Delegates indicating the Medical Society's support of the Governor to call a special session to provide funding for education.
 - (2) Briefly discussed the editorship of the *Journal of the Arkansas Medical Society*.
 - (3) Discussed the proposal by Deborah Bryant for the Society to select someone to assist she and Frank Miller in their efforts toward indigent care of obstetrical cases.
 - (4) Discussed the recommendation by the House of Delegates to establish a Department of Governmental Affairs.

May 27, 1987

- (1) Heard a report from Mr. Hanley concerning money problems with the Medicaid Program.
- (2) Discussion of the Impaired Physician Committee.
- (3) Voted to contribute \$480.00 to Camp Aldersgate for the summer camp program.
- (4) Discussed the proposal to have an editorial board as the editorship of the *Journal*. Board characteristics and responsibilities are as follows: Composition: Six members, one of which would be the Dean of the College of Medicine at UAMS, or his designee. They must all be members of the Medical Society and appointed by the Council. They will have staggered terms of three years and, the group will select its own chairman. Responsibilities: Solicit scientific articles to publish, and to review those articles for medical accuracy and quality. They are also to write editorials and solicit guest editorials or scientific material or research. Each person would not be responsible for more than two editorials a year. When necessary, they should seek a qualified reviewer for an ar-

ticle not in their area of knowledge. Meet with other board members when necessary to discuss policies associated with scientific content. They will also act on direction of the Council.

- (5) The Executive Committee approved the allocated travel expenses for Mr. Ken LaMas-tus and John Hestir to attend the AMA meeting in Chicago.

June 30, 1987

- (1) Approved the out-of-state travel for two staff people to attend the American Association of Medical Society Executives meeting in New Orleans.
 - (2) Approved the Society to apply for a grant for AIDS education through the Arkansas Department of Health.
 - (3) Approved a contribution of \$1,000 to the Southern State Legislative Conference to be held in Little Rock.
 - (4) Ray Jouett asked that the Society notify the membership that they can obtain copies of the Cumulative Index of the Journal of the Arkansas Medical Society for the years 1890-1986.
 - (5) Chairman Lawson discussed the program for the Winter Meeting.
4. The Council voted to accept the concept of the Editorial Board as discussed in the minutes of the May 7th Executive Committee meeting.
 5. Lewis Allen from the Tri-County Medical Society addressed the Council concerning the Tri-County resolution which was presented to the House of Delegates during the Annual Session.
 6. William Golden discussed a program entitled "Personal Care" developed by the American Society of Internal Medicine.
 7. Dr. Golden gave an update on the AMA Young Physicians Section.
 8. Todd Holt, President of the Resident Physician Section, gave a brief report on his recent campaign at the AMA annual meeting in Chicago.
 9. Dr. Holt gave a report on the AMS Resident Physician Section.
 10. Ben Saltzman explained the proposed state regulation #8.3 which would require the identification of bodies that are suspected of having a communicable disease.
 11. Joe Verser requested that a letter of appreciation be written honoring Ben Saltzman for his hard work and cooperation during his tenure as Director of the Arkansas Department of Health.
 12. William Jones outlined the activities of the AIDS committee. He informed the Council that a training session will be held on August 15th at the

Health Department for physicians who have indicated a willingness to serve on a teaching team in their area of the state. The seminar will teach physicians to recognize, diagnose, and counsel AIDS patients. Dr. Jones also reported that the AIDS Committee has submitted an application for a \$25,000 grant to the Health Department which would reimburse the Society for their expenses. The Council voted to allocate up to \$2,000 to cover expenses during the interim period before the grant is approved.

13. Mr. Ken LaMastus reviewed the year-to-date receipts and disbursements of the Society along with a letter from Blue Cross Blue Shield stating the new premium for the physicians' group health insurance plan.
14. Chairman Lawson announced his recommended appointments to the Impaired Physicians Committee. They are J. L. Martindale, Benton, replacing Aubrey Smith of Little Rock as Chairman; Jim Arnold, Fayetteville, replacing Glen Baker of Little Rock; and Gary Harper of Little Rock.
15. Chairman Lawson read a letter from John Crenshaw, Chairman of PAC, asking the membership and the Council to support AMS-PAC.
16. The Council approved the appointment of Jerry Morgan of Stuttgart to the Indigent Care Committee chaired by Deborah Bryant of the Health Department.
17. Chairman Lawson expressed an interest in arranging a winter meeting for presidents or representatives of each specialty society to discuss areas of mutual concern. This is an effort to unite the Society and specialty societies.
18. Joe Verser gave an update on his recent trip to the AMA annual meeting and explained the Board of Trustees final report.
19. Mr. Mike Mitchell reported on the Schaefer Lawsuit trial.
20. Lloyd Langston reported that the Long Range Planning Committee will target approximately ten or eleven areas next year.
21. John Hestir reviewed the survey results of the Membership Benefits Committee.

The Council met on Sunday, October 4, 1987, at the Riverfront Hilton Hotel in North Little Rock and the following business was transacted or discussed:

1. The minutes of the July 19, 1987 Council meeting were approved as printed.
2. The August 8, 1987, Executive Committee minutes were approved as follows:
 - (1) Interviewed two people for consideration as a full-time and part-time staff persons for the Department of Governmental Affairs.

- (2) Approved half of the expenses for Mr. David Wroten to attend the AMPAC meeting in Washington.
 - (3) Reviewed a physician's request for refund of his dues.
 - (4) Discussed the Winter Meeting date possibly being September 27, 1987.
3. The minutes from the August 26, 1987 Executive Committee meeting were approved as follows:
 - (1) Approval for Mr. Ken LaMastus to attend the CEO meeting in Tuscon in October and Mr. David Wroten and John Hestir to attend a communication conference in Chicago, October 29-31, 1987.
 - (2) Discussed the Winter Meeting date for October 4th and inviting a speaker from the PRO and having a AMA consultant to speak at the luncheon.
4. The minutes of the September 23, 1987, Executive Committee meeting were approved as follows:
 - (1) Met with Dr. George Mitchell to discuss the relationship between the Society and Arkansas Blue Cross Blue Shield now that BCBS is a mutual insurance company.
 - (2) Approved travel for Ms. Peggy Pryor Cryer to attend the Auxiliary Leadership Conference in Chicago.
 - (3) Approved a \$60.00 per month expenditure for the Impaired Physicians Committee Answering Service that would be operated on a 24 hour a day basis.
 - (4) Approved travel for Mr. Ken LaMastus and a new staff person to attend the Socioeconomic Conference to be held in New Orleans in October.
 - (5) Heard a request from Astride Bseifen, Professor of Pharmacology and Anesthesiology and Chairman of the Subcommittee on Student Research Day for assistance in funding medical student travel to the national meeting where they will present papers.
5. George Warren made a motion that the AMS headquarters communicate with the AMA to see if there is a movement underway to repeal the McCarran-Ferguson Act which grants exemption from the anti-trust law to the insurance industry. Time permitting, a resolution should be submitted to the AMA for consideration in their December 1987 House of Delegates meeting.
6. The Council voted to adopt the eighth amendment to the Arkansas Medical Society Money Pension Plan and Trust.
7. Mr. Mike Mitchell explained the recent ruling of the Schaefer lawsuit. A motion was made to instruct Mr. Mitchell to file an appeal to the Eighth

Circuit Court. The estimated cost of the appeal is \$15,000.

8. Mr. Mike Mitchell suggested that for clarity he could summarize both the suit and ruling of the Schaefer Lawsuit in the next few issues of the *Journal of the Arkansas Medical Society*.
9. Robert Langston reported that the Boone County annual legislative rally dinner was a huge success and encouraged other counties to do the same.
10. William Jones gave an update on the Committee on AIDS. Reporting there have been twenty-three meetings throughout the state with 842 people in attendance.
11. The Council voted to accept the information from the Public Relations Committee concerning the ASIM Personal Care Program and wait for further information from the Arkansas Academy of Family Physicians.
12. Mr. Ken LaMastus gave the report of the Budget Committee and distributed a list of the Society members who have not paid their 1987 dues and/or assessment.
13. Chairman Lawson recommended the appointment of Mrs. Robert Gullett (Brenda) of Pine Bluff to the AMS-PAC Board.
14. Chairman Lawson recommended the appointment of Warren Douglas to fill the unexpired term of Frank Morgan on the Budget Committee.
15. John Crenshaw, Chairman of AMS-PAC, gave a report on his recent trip to Washington, D.C.

Fifth Councilor District **Cal R. Sanders, Councilor**

The Councilor District of the Arkansas Medical Society met on January 15, 1988, at the El Dorado Country Club. There was fair attendance and I. Dodd Wilson, M.D., Dean of the University of Arkansas College of Medicine, was the guest speaker. The meeting was called to order with James Guthrie, M.D., presiding.

The following officers were elected: Cal Sanders, M.D., Councilor; Kenneth Duzan, M.D., President; and Wayne Elliott, M.D., Secretary/Treasurer.

Dr. Wilson discussed the current status of the University of Arkansas College of Medicine and its progression and developments. Emphasis was directed at the problems the College of Medicine is having as well as other national medical schools. There are fewer medical school applicants to choose from as well as the decreasing quality of these applicants. He also stated that this teaching institute was doing an excellent job of presenting knowledge and was the only medical school in the United States which had all their seniors pass the FLEX examination. Dr. Wilson strongly suggest that we, as practicing physicians, encourage and recommend the medical profession to quality students, beginning even in our high

schools, pointing out that, despite overall public opinion, medicine remains a very honorable and satisfying profession.

Report of the Executive Vice President **Ken LaMastus, CAE**

This past year, 1987, represents the first full year the Arkansas Medical Society has been located in the new building in Little Rock and the first year that we functioned with an almost totally new staff.

The Medical Society building which is owned by a group of AMS members is currently 86% leased. This building is thought to be, by many, one of the most attractive buildings of its size in the Little Rock area. We are especially pleased with the number of tenants considering the large number of office buildings completed in west Little Rock as well as downtown. We are located near the intersection of I-430 and I-630, presenting easy access to downtown as well as other parts of the city.

Our staff looked forward to gaining more experience in the Society's operations but also in getting back to a more reasonable level of expenditures. Nineteen hundred eighty-five and 1986 saw considerable expenditures by the Society on the building and the move to Little Rock.

Our budgeting process for 1987 proved to be reasonable and prudent. Except for the additional legal expenses associated with the Schaefer Lawsuit, our budget was on schedule. Our 1988 projected budget was in the black even after excluding the revenue and expenses associated with the Department of Governmental Affairs.

One of our goals for 1987 was to automate the office to the extent possible and stay within our budget. We succeeded in our efforts of automation by fully computerizing our accounting and membership systems and providing word processing equipment for all of our support staff. We were able to do this because of the decline in the cost of personal computers and through purchasing some used equipment.

We accomplished another one of our goals by making significant improvements in our *Journal*. These improvements came about through the efforts of David Wroten, our Assistant Executive Vice President, and Martha Taylor, who is the Managing Editor. We have added new features to the *Journal* including items other than the traditional scientific articles. These have included articles about questions often asked about legal matters as well as other practice management information. Many of our members have written or called complimenting the staff on the noticeable changes made to the *Journal*. An Editorial Board has been established to be in charge of scientific articles that appear in the *Journal*.

Along with the changes appearing inside the *Journal* have been those associated with actual production of the *Journal*. We are now using a small computer with a desk-

top publishing software package which allows us to do virtually all the *Journal* in-house. The exception is, of course, advertising and photographs. Mrs. Taylor has done an extremely good job in putting together the *Journal*, and it has allowed us to cut lead time on the *Journal* by approximately two weeks and given us more control over how the *Journal* is laid out. The end result is a considerable cost savings over what we would have incurred using the old system of simply typing the material and sending it to the printer and having them to do all the layout and typesetting.

At the 1987 Annual Session of the AMS, a resolution was passed for the AMS to establish a special committee on AIDS. Dr. William Jones of Little Rock was selected as Chairman. The committee has done an outstanding job attempting to educate physicians as well as providing the physicians of the state a month by month report on the AIDS situation in Arkansas. The committee has been responsible for hosting educational programs for almost 5,000 people across the state.

One of the changes brought about this year by direction of the AMS House of Delegates was to increase the dues to establish a Department of Governmental Affairs. This has been accomplished and Mr. Z. Lynn Zeno was hired to direct this department. He brings to the Society thirteen years experience in governmental affairs work dealing with issues in Arkansas as well as working with the congressional delegation in Washington. This has been brought about because of an increased awareness on the part of the membership of the Society that the actions of both state and federal government are having a greater impact on the way medicine is financed and practiced.

Examples of the problems faced by physicians in both the state and federal government has been keeping physicians out of the DRG program, mandatory assignment, and the MAAC program for nonparticipating physicians. Recent problems in Arkansas with the Medicaid program include the precertification program and the new policy of not paying any deductible or coinsurance for those patients who are on both Medicare and Medicaid. Together these two programs are causing a great deal of consternation among the Society membership.

It is apparent from the changes going on in medicine that physicians need to be united in their efforts in solving these problems. We are faced with an ever increasing aged population along with the ever increasing cost of medical care and seemingly idiotic answers on the part of both the state and federal government.

Impaired Physicians Committee

Joe L. Martindale, Chairman

The Impaired Physicians Committee was reorganized in 1987 and is composed of the following members: Joe L. Martindale, Benton, Chairman; Lee B. Parker, Jr.,

Fayetteville; Bascom P. Rancy, Jonesboro; Carl H. Bell, Jr., Pine Bluff; Robert L. Ross, Pine Bluff; James A. Arnold, Fayetteville; and Gary Harper, Little Rock. The committee met only once, August 30, 1987, during which we established guidelines and adopted contracts for treatment entry and after care. A twenty-four hour hotline number, (501) 370-8221, was established. The committee chairman also spoke at a state medical society auxiliary meeting in Hot Springs.

Presently the committee is monitoring the after care of several physicians. The response and support of our group has been good and we trust that it will get better in the future. We feel that during these short months we have raised the awareness level of chemical dependency in our profession which is a giant step for the committee. No longer can we deny that chemical dependency also happens to doctors. The reality is before us; ten to seventeen percent of our profession are in some state of addiction.

The Impaired Physicians Committee is not a small task nor is it being taken lightly. The committee could not function without help from all of us. As chairman of the committee, I wish to thank each of my committee members for their willingness and help and, also, the Medical Society and Council for their support.

Committee on Insurance

Eugene F. Still, II, M.D., Chairman

The Insurance Committee has met several times both in person and by conference call. This has been a most active year in that we have been making the initial plans to institute a comprehensive insurance program that will benefit the entire medical society. At our meeting in Fayetteville, we interviewed six insurance companies who had expressed an interest in being the agent for the medical society's endorsed insurance plan. Later in the year, we considered the application of a seventh company. After much consideration and a great deal of correspondence to answer questions for the medical society, Mr. Jim Foss and Associates was selected to represent the program and was endorsed by the society.

Mr. Foss will first develop a program for disability followed by health, life, short-term disability and then a full-benefit package. Those members currently covered will be assured of continuity of coverage under the new program.

We anticipate a developmental time of approximately two years for the first part of this program with other issues to follow as time permits and acceptance by the membership.

Committee on Medical Legislation

James R. Weber, M.D., Chairman

Nineteen hundred eighty-seven has proved to be a banner year for Arkansas physicians interested in the leg-

islative and political process. The Arkansas Medical Society State Legislative Fund and the Arkansas Medical Society Political Action Committee have both shown a significant increase in contributions and interest among physicians across the state.

By the time you receive your copy of the *Journal* in which this report appears, the primary election in Arkansas will probably already have occurred. Arkansas is one of the southern states holding their primaries early to give the south more clout in determining the nominees for President of the United States. The primary "Super Tuesday" will be March 8th.

The Arkansas Medical Society has placed increased emphasis on getting physicians involved in the legislative process. Two or three issues in the last legislative session helped to increase physicians' awareness as to the importance of this work.

Of specific interest the bill introduced which would allow optometrists to use drugs for the treatment of eye diseases and the bill introduced modeled after Massachusetts law that would have required all physicians to accept what Medicare paid as payment in full. As a result of this increased emphasis, the Arkansas Medical Society House of Delegates voted a dues increase of \$100 to establish a

Department of Governmental Affairs. We are very fortunate in that we were able to hire Mr. Z. Lynn Zeno as director of this department.

Mr. Zeno comes to the Society with a number of years experience in governmental affairs. We have worked with Mr. Zeno on issues in the past when he worked for the Independent Insurance Agents of Arkansas. On many issues the Society shared the same interest as Mr. Zeno's former association.

I would like to express my appreciation to the many physicians across the state who are taking a more active part in the governmental affairs impact in the practice of medicine. My thanks go to those physicians who volunteer their services at the Capitol as "Physician of the Day". They served a valuable function and their services are appreciated by the legislators.

Along with this report is a listing of those physicians who made contributions to the State Legislative Fund. This is the fund the Society uses to make contributions to candidates running for state legislative races.

I would like to thank our general counsel, Mr. Mike Mitchell, who has provided a great deal of assistance in his capacity as an attorney. He has also spent every day at the Capitol along with Mr. Ken LaMastus and Mr.

David Wroten in the actual hands-on lobbying effort.

Contributors to State Legislative Fund (1987)

Arkansas County

- * John M. Hestir
- * Carl E. Northcutt
- * Hoy B. Speer, Jr.
- * Marolyn N. Speer
- Dennis Yelvington

Baxter County

- * Daniel P. Chock
- * James C. Dunbar
- * Robert L. Kerr
- Thomas E. Knox
- * Ray E. Stahl (nonmember)
- David T. Sward
- * Joe M. Tullis
- * Jack C. Wilson

Benton County

- * James H. Arkins
- Oscar L. Henderson
- * Robert E. Holder
- Carl M. Kendrick
- * Michael R. Platt

Boone County

- * Thomas E. Bell
- * Joe D. Bennett
- * J. Brad Carter
- * Carlton L. Chambers, III
- * Geoffrey Dunaway (nonmember)
- * Noel F. Ferguson
- * Jean C. Gladden
- * Thomas R. Hoberock

- * Charles R. Klepper
- * Robert H. Langston
- * Alice G. Laule
- * Charles A. Ledbetter
- * Robert Morris (nonmember)
- * Victor A. Rozeboom
- * Sam J. Scroggins
- * John T. Troupe
- * Don R. Vowell
- * Rhys A. Williams
- * Joe B. Wilson

Bradley County

- * Kerry F. Pennington
- * Joe H. Wharton

Carroll County

- * Oliver Wallace

Cleburne County

- * Thomas L. Eans

Craighead-Poinsett County

- John F. Ball
- * Steven M. Blanchard
- Glenn E. Dickson
- * Roger D. Hill
- * Robert G. Lassonde
- * Douglas L. Maglothlin
- Larry E. Mahon
- James L. Schrantz
- * William T. Shanlever
- * Joe H. Stallings, Jr.
- * Phillip M. Utley

- * Don B. Vollman, Jr.

Crittenden County

- * G. Edward Bryant, Jr.
- * Milton D. Deneke
- * Edgar S. Ferguson
- * Keith B. Kennedy
- Samuel G. Meredith, Jr.
- * Mrs. C. Herbert Taylor, Jr.

Dallas County

- * John H. Delamore
- * Don G. Howard

Drew County

- * Paul A. Wallick

Franklin County

- * C. C. Long

Garland County

- * Robert V. Borg
- James R. Braun
- * Central Arkansas Clinic of Obstetrics & Gynecology, P.A.
- * Richard W. Dunn
- * W. Martin Eisele
- * James E. Griffin
- A. Dale Kincheloe
- Robert W. Kleinhenz
- Stuart B. McConkie
- * Robert F. McCrary, Jr.
- * John B. Simpson

- Bruce L. Smith, Jr.

- * Thomas P. Thompson, Jr.
- Thomas R. Wallace
- Luther R. Walley
- Philip A. Woodward
- Charles C. Wright

Grant County

- * Jack M. Irvin

Greene-Clay County

- * J. Darrell Bonner
- * Roger E. Cagle
- * Asa A. Crow
- * R. Lowell Hardcastle
- Marion P. Hazzard
- * Clarence L. Kemp
- * J. Larry Lawson
- * Jack G. Richmond
- * John R. Sellars
- * C. Mack Shotts, Jr.
- * The Doctors' Clinic
- * Dwight M. Williams

Hempstead County

- Lloyd F. Mercer (nonmember)

Hot Spring County

- * Bruce A. White

Howard County

- * John E. Hearnberger
- * Ted H. Pye

Independence County

- * James D. Allen
- * Edward J. Jones
- * John S. Lambert
- * Dennis W. Luter
- * William J. Waldrip, III

Jackson County

- * Guilford M. Dudley, III
- * M. Haymond Harris
- * Ramon E. Lopez
- * Roland C. Reynolds
- * Jack S. Young, III

Jefferson County

- * Banks Blackwell
- * Robert R. Gullett, Jr.
- * William F. Harper
- * Sherman H. Hoover
- * Shafqat Hussain
- * David C. Jacks
- * William J. James
- * Larry G. Lipscomb
- * Kenneth A. Martin
- * J. William Nuckolls
- * William C. Rainey
- * Ferdinand K. Samuel

Little River County

- * James D. Armstrong

Lonoke County

- * Thomas R. Braswell
- * Jerry Chapman
- * Bryon E. Holmes

Miller County

- * A. E. Andrews, Jr.
- * Eric E. Hall
- * C. Lynn Harris
- * Larry M. Peebles
- * Jayant B. Rana (non-member)
- * Patrick J. Somerville

Mississippi County

- * Lawrence J. Abramson
- * Zvi Aviner
- * Eldon Fairley
- * Sybil R. Hart
- * James H. Hudson
- * G. Scott Husted
- * Joseph V. Jones
- * Merrill J. Osborne
- * Catherine J. Oster
- * Stephen R. Rauls
- * L. C. Sammons, Jr.

Phillips County

- * Francis M. Patton

Polk County

- * David D. Fried

Pope County

- * Charles H. Brown
- * Joe B. Crumpler, Jr.
- * William Galloway
- * Theeradej (Ted) Honghiran
- * James M. Kolb, Jr.
- * Robert H. May, Jr.
- * Don C. Riley

- * Charles F. Wilkins, Jr.
- * David M. Williams

Pulaski County

- * John C. Baber, Jr.
- * David L. Barclay
- * Charles D. Barg
- * Robert L. Berry
- * Raymond V. Biondo
- * William F. Blankenship
- * James E. Boger
- * W. Scott Bowen
- * Joseph K. Buchman
- * Hugh F. Burnett
- * Richard A. Calhoun
- * James W. Campbell
- * Robert E. Casali
- * Harold H. Chakales
- * David B. Cheairs
- * Daniel P. Chisholm
- * Amail Chudy
- * Richard B. Clark
- * H. Howard Cockrill, Jr.
- * David N. Collins
- * R. Lewis Crow, Jr.
- * Byron Curtner
- * Glenn V. Dalrymple
- * D. Bud Dickson
- * Warren M. Douglas
- * Rex M. Easter
- * A. Stuart Fitzhugh
- * Thomas M. Fletcher
- * Wayne B. Glenn
- * Henry H. Good
- * James L. Hagler
- * Herbert L. Hahn
- * A. David Hall
- * Ernest H. Harper
- * Donald R. Harris
- * William T. Harris
- * William F. Hayden
- * Richard L. Hayes
- * W. Ducote Haynes
- * Harold H. Hedges
- * Richard Y. Henry
- * Marcia L. Hixson
- * Steven C. Hodges
- * Jerry C. Holton
- * Harold G. Hutson
- * Morris A. Jackson
- * Dale E. Johnston
- * W. Ray Jouett
- * Reed W. Kilgore
- * Michael F. Knox
- * W. Payton Kolb
- * Robert W. Laakman
- * Mr. Ken LaMastus
- * Robert C. Landgren
- * Harold D. Langston
- * LeRoy A. LeNarz
- * Joe K. Lester (nonmember)
- * Jay M. Lipke
- * John Lohstoeter (nonmember)
- * Virgle E. Lyons, Jr.
- * Peter M. Marvin
- * Hosea W. McAdoo, Jr.
- * Mark P. McAndrew
- * Richard E. McCarthy
- * James E. McDonald
- * James R. McNair
- * Mr. Mike Mitchell

- * Wandal D. Money
- * James S. Mulhollan
- * Bruce E. Murphy
- * John C. Nash
- * Alvah J. Nelson, III
- * Carl L. Nelson, Jr.
- * David A. Newbern
- * Joseph A. Norton
- * Mrs. Joseph A. Norton
- * George A. Norton
- * Terrence A. Oddson
- * Clifton L. Parnell, III
- * R. Earl Peebles
- * Robert A. Porter, Jr.
- * Jerry L. Potts
- * Jerry L. Prather
- * J. Gerald Quirk, Jr.
- * Radiology Consultants
- * Carl J. Raque
- * Gene W. Reid
- * Charles H. Rodgers
- * Thomas P. Rooney
- * Ashley S. Ross (nonmember)
- * F. Hampton Roy
- * William A. Runyan
- * Edward H. Saer, III
- * Ben N. Saltzman
- * Jan W. Scruggs
- * Karen S. Seale
- * Walter G. Selakovich
- * C. Kemp Skokos
- * John G. Slater, Jr.
- * Purcell Smith, Jr.
- * A. Jack Somers
- * J. Michael Stair
- * William L. Steele
- * Alan R. Storeygard
- * John R. Stotts
- * Jan R. Sullivan
- * David E. Tamas
- * Jerry L. Thomas
- * S. Berry Thompson
- * W. Everett Tucker
- * Robert G. Valentine, Jr.
- * John L. Vander Schilden
- * Edward R. Weber
- * James R. Weber
- * Michael J. Weber
- * C. David Williams
- * G. Doyne Williams, Jr.
- * Ronald N. Williams
- * John L. Wilson

Randolph County

- * Hal S. Barre

Saline County

- * David L. Caldwell
- * Ralph D. Cash
- * Robert A. Council, Jr.
- * J. Shelby Duncan
- * Howell V. Hill
- * Frank G. Thibault, Jr.

Sebastian County

- * Joe Paul Alberty
- * Mike Berumen
- * A. C. Bradford
- * James H. Buie
- * Gary V. Felker
- * Alfred B. Hathcock

- * Archie Hewett
- * John D. Hoffman
- * Ralph N. Ingram
- * Peter J. Irwin
- * William E. Knight
- * James W. Long
- * Jack L. Magness, Jr.
- * Marvin E. Mumme
- * Steven N. Nelson
- * Douglas W. Parker, Jr.
- * Paul L. Raby
- * William M. Sherrill, Jr.
- * Kenneth Wallace
- * John W. Wideman
- * Morton C. Wilson
- * Michael S. Wolfe
- * Munir M. Zufari

Tri-County

- * Michael N. Moody

Union County

- * James C. Callaway
- * Bert Dougherty
- * Kenneth R. Duzan
- * Wayne G. Elliott
- * W. John Giller, Jr.
- * Ernest R. Hartmann
- * Diana T. Jucas
- * Robert L. Parkman, Jr.
- * Richard C. Pillsbury
- * Allan S. Pirnique
- * Joe F. Turnbow
- * S. S. Vasani
- * George W. Warren
- * Larkin M. Wilson, Jr.

Washington County

- * Jack D. Alston
- * James A. Arnold
- * Donald B. Baker
- * David L. Brown
- * James F. Cherry
- * Tom P. Coker
- * David A. Davis
- * Robert W. Dow
- * G. Glen Fincher
- * Ted J. Fish
- * Leopold H. Garbutt
- * W. Duke Harris
- * Morris M. Henry
- * Martha Hutson
- * William C. Martin
- * James F. Moore
- * John P. Park
- * John R. Power
- * David L. Rogers
- * E. Mitchell Singleton
- * John B. Weiss

White County

- * Daniel S. Davidson
- * Hugh R. Edwards
- * Terry G. Green
- * John C. Henderson
- * J. Garrett Kinley
- * Robert D. Lowery
- * James R. McCoy

* Contributed over \$100.00

Arkansas Medical Society Political Action Committee John Crenshaw, M.D., Chairman

The year 1987 is one that has seen many changes in the political awareness of the medical profession. More than ever before, physicians have become aware of their political responsibilities on behalf of their profession and patients. These changes have translated into a successful year for the Arkansas Medical Society Political Action Committee (AMS-PAC).

Although 1987 was a non-election year, AMS-PAC had its most successful year ever. During the year, 441 physicians, physicians' spouses, and staff members contributed to AMS-PAC. This represents a 50% increase over 1986. Arkansas now ranks 22nd in the nation as compared to other state medical political action committees (up from 41st in 1986).

During the month of September, AMS-PAC Chairman John Crenshaw, Treasurer Ramona Taylor, and staff person David Wroten attended the national AMPAC conference in Washington, DC. During this meet-

ing they personally visited with most of our representatives and senators. The contacts that were made should have a significant effect on future issues. In October, AMPAC sponsored a political education seminar in conjunction with the Arkansas Medical Society's Winter Meeting. The program was presented by AMPAC and Mr. Michael Dunn. Approximately 40 physicians and auxiliaries participated in this seminar and learned about the political process. Part of the program included a campaign simulation game which taught the basics of planning and running an effective political campaign.

We are proud of the record accomplishment achieved by AMS-PAC during the past year. We must now turn our attention to the 1988 elections. If 1987 is any indication, 1988 should again be a record year for AMS-PAC. This will translate into better communications with our elected officials in Washington and better representation for the physicians of Arkansas.

On behalf of the Board of Directors of AMS-PAC, we appreciate the support of our colleagues and their families who have made this a successful year and we urge your continued support.

Contributors to the Arkansas Medical Society Political Action Committee (1987)

Arkansas County

- * John M. Hestir
- * Hoy B. Speer, Jr.
- * Dennis B. Yelvington

Baxter County

- * Daniel P. Chock
- Helga E. Chock
- Yoland M. Condrey
- James C. Dunbar
- * Peter C. Dykstra
- * Philip R. Hardin
- * Stacey M. Johnson
- * Peter A. MacKercher
- Robert G. Peden
- * David H. Roberts
- * Joe M. Tullis

Benton County

- James A. Adrian
- * James H. Arkins
- George H. Benjamin
- Fay W. Boozman, III
- Robert E. Holder
- * Michael R. Platt
- * Michael C. Reese
- * Wallace A. Rolniak
- William G. Swindell
- * Jan T. Turley

Boone County

- * Walter P. Ashford
- * Thomas E. Bell
- * Joe D. Bennett
- * J. Brad Carter
- * Carlton L. Chambers, III

- Charles D. Daniel
- * Geoffrey Dunaway
- (nonmember)
- * Noel F. Ferguson
- * Jean C. Gladden
- * Thomas R. Hoberock
- * Charles R. Klepper
- * Robert H. Langston
- Mrs. Robert H. Langston
- * Alice G. Laule
- * Charles A. Ledbetter
- Mahlon O. Maris
- * Robert Morris (nonmember)
- Victor Rozeboom
- * Sam J. Scroggins
- * John T. Troupe
- * Don R. Vowell
- * Rhys A. Williams

Bradley County

- Kerry F. Pennington

Carroll County

- * Oliver Wallace

Chicot County

- * John P. Burge

Clark County

- Robert A. Dorman

Cleburne County

- Michael E. Barnett
- * Thomas L. Eans

Craighead-Poinsett County

- * Mrs. Jerry D. Blaylock

- Glenn E. Dickson
- Clarence E. Gossett
- Mrs. Clarence E. Gossett
- Robert G. Lassonde
- * Douglas L. Maglothlin
- * Larry E. Mahon
- * Bobby E. McKee
- Randy D. Roberts
- Mrs. Randy D. Roberts
- * Albert H. Rusher, Jr.
- * Joe H. Stallings, Jr.
- Phillip M. Utley
- Troy A. Vines
- * Don B. Vollman, Jr.
- * William J. Waldrip, III
- Joe T. Wilson, Jr.

Crawford County

- Millard C. Edds
- Mrs. Millard C. Edds

Crittenden County

- * Glen E. Bryant, Jr.
- * Milton D. Deneke
- * Guy L'Heureux
- Trent P. Pierce
- Glenn P. Schoettle
- * C. Herbert Taylor, Jr.
- * Mrs. C. Herbert Taylor, Jr.
- * Joseph F. Teply
- Gene Tullis
- * H. Wade Westbrook

Dallas County

- * John H. DeLamore
- * Don G. Howard

Drew County

- * Paul A. Wallick

Faulkner County

- * Sam V. Daniel
- L. Fred Gordy, Jr.

Garland County

- Richard W. Dunn
- W. Martin Eisele
- * James L. Gardner
- * Mrs. James L. Gardner
- Robert L. Hill
- * Thomas H. Hollis
- Ron A. Kaler
- Walter G. Klugh, Jr.
- J. Kelly Mahone
- * Robert F. McCrary, Jr.
- Mrs. Robert McCrary, Jr.
- Gary N. Meek
- * Mrs. Deno Pappas
- Brenda N. Powell
- Mr. Fess Powell
- Dowling B. Stough, III
- * W. Al Thomas
- * Luther R. Walley
- * Philip A. Woodward
- William J. Wright

Grant County

- * Jack Irvin

Greene-Clay County

- J. Darrell Bonner
- * Roger E. Cagle
- * George H. Collier

* Asa A. Crow
R. Lowell Hardcastle
* Marion P. Hazzard
* George A. Hobby
* Bryant W. Jones
* Clarence L. Kemp
* J. Larry Lawson
* Richard O. Martin
Bennie E. Mitchell
Billie C. Page
Mrs. Billie C. Page
* John R. Sellars
* C. Mack Shotts, Jr.
* Dwight Williams
Jacob M. Williams

Hempstead County
* N. Leland Dodd
Lowell O. Harris

Hot Spring County
Bruce A. White

Howard-Pike County
Phillip L. White

Independence County
* Charles R. Akin
James D. Allen
Andy Davidson (nonmember)
* Neema Garst (nonmember)
* Jim E. Lytle
Charles M. McClain, Jr.
* Lackey G. Moody
Charles A. Taylor
Robert B. Walton

Jackson County
* Mufiz A. Chauhan
John W. Foote
Mr. A. K. Junkin
* Ruth H. Junkin
Ramon E. Lopez
Mrs. Ramon E. Lopez
* Roland C. Reynolds

Jefferson County
James C. Campbell, Jr.
David L. Carlisle
* John Crenshaw
* Mrs. John Crenshaw
* Jacquelyn Frigon
* Robert R. Gullett, Jr.
* Mrs. Robert R. Gullett, Jr.
* Sherman H. Hoover
Shafqat Hussain
Mrs. Shafqat Hussain
William Joe James
Mrs. William Joe James
* Lloyd G. Langston
James A. Lindsey
* Larry G. Lipscomb
* Mike S. McFarland
* J. William Nuckolls
J. R. Pierce, Jr.
Mrs. J. R. Pierce, Jr.
* William C. Rainey
* Sterling A. Roaf
* Stephen D. Shorts
Paul L. Smith
* Thomas Townsend

Lawrence County
John D. Smooth
Stephen K. Wilson

Logan County
Jerry R. Baskerville

Lonoke County
* Leslie F. Anderson
* Jerry C. Chapman

Miller County
* A. E. Andrews, Jr.
C. Lynn Harris
Mrs. C. Lynn Harris
* Frederick E. Joyce
* Mrs. Allen R. Lee (nonmember)
* Paul D. Meredith
* T. M. O'Gorman, Jr.
(nonmember)
* L. M. Peebles
William L. Shaffer
* James E. Soyars (nonmember)
* Jerry B. Stringfellow

Mississippi County
Lawrence J. Abramson
James L. Canale
Harvey W. Clewans
Eldon Fairley
* Francis J. Fenaughty
* R. Scott Fergus
* Sybil R. Hart
Cecil E. Holcomb
* Mrs. Cecil E. Holcomb
* G. Scott Husted
* Merrill J. Osborne
* Catherine J. Oster
* Stephen R. Rauls
* Mrs. Stephen R. Rauls
L. C. Sammons, Jr.

Monroe County
* Benedict F. Pupsta

Phillips County
* Robert D. Miller, Jr.
* Francis M. Patton
* P. Vasudevan

Pope County
Ted E. Ashcraft
Mrs. Ted E. Ashcraft
* Nathan F. Austin
Patricia J. Birum
* James G. Burgess
* James M. Kolb, Jr.
* Mrs. James M. Kolb, Jr.
* Douglas H. Lowrey
Mrs. George E. Malone
George E. Malone
Kelly H. Meyer
* Don C. Riley
* Stanley D. Teeter
* Finley P. Turner, II
* Charles F. Wilkins, Jr.

Pulaski County
Carlos A. Araoz
Mrs. Carlos A. Araoz
* John C. Baber, Jr.

Susan W. Baker
* David L. Barclay
Charles D. Barg
* Raymond V. Biondo
William B. Bishop
John H. Bornhofen
Renie E. Bressinck
* Joseph K. Buchman
* Anthony Bucolo
Hugh F. Burnett
Thomas Cain (nonmember)
Joseph D. Calhoun
James W. Campbell
Robert E. Casali
* Harold H. Chakales
Richard B. Clark
* H. Howard Cockrill, Jr.
* Mrs. Paul J. Cornell
* J. B. Cross
R. Lewis Crow, Jr.
* John L. Daugherty
David M. Dean
* Warren M. Douglas
* Mrs. Warren M. Douglas
Barre F. Finan
Robert L. Fincher
* Thomas M. Fletcher
Anthony R. Giglia, III
* Henry H. Good
Karen G. Grant
* James L. Hagler
A. David Hall
Mrs. A. David Hall
David Lee Harshfield, Jr.
Harold B. Hawley
William F. Hayden
* Richard L. Hayes
H. Graves Heamsberger, III.
Harold H. Hedges
Mrs. Harold H. Hedges
* Richard Y. Henry
Steven C. Hodges
* Harold G. Hutson
* Dale E. Johnston
W. Ray Jouett
Mrs. W. Ray Jouett
John W. Joyce
* Michael T. King
Agnes J. Kolb
* W. Payton Kolb
Mrs. W. Payton Kolb
Thomas W. Koonce
* Mr. Ken LaMastus
* James H. Landers
* Marvin Leibovich
* Bruce Leipzig
Virgle E. Lyons, Jr.
John A. Mallory
F. Patrick Maloney
* R. Jerry Mann
* Stephen R. Marks
* Richard H. Martin
* Hosea W. McAdoo, Jr.
* James McDonald
James R. McNair
Frank C. Miller
* Mr. Mike Mitchell
J. Malcolm Moore, Jr.
Randolph Murphy
Alvah J. Nelson, III
* David H. Newbern

Jon Kirby Newsum
James E. Nolen
Joseph A. Norton
Terrance A. Oddson
J. Mayne Parker
Mrs. J. Mayne Parker
* Clifton L. Parnell, III
* R. Earl Peebles
John D. Pike
Norton A. Pope
* Jerry L. Potts
* Mary L. Ragsdill
Carl J. Raque
John F. Redman
* Gene W. Reid
William H. Riley
Robert R. Ritchie
* Charles H. Rodgers
Mrs. Charles H. Rodgers
* F. Hampton Roy
Ben N. Saltzman
Mrs. Ben N. Saltzman
* Jan W. Scruggs
John P. Shock
Peter G. Singer
* Fay M. Sloan
Mr. Hillel Sloan
James M. Sloan
* Aubrey C. Smith
* Purcell Smith, Jr.
Tom Smith
Thomas W. Smith
* Jack J. Sternberg
* Alan R. Storeygard
* J. Samir Sulieman
David R. Taylor
John R. Thompson
S. Berry Thompson, Jr.
Bill L. Trantum
* W. Everett Tucker
* Mrs. Juanita Valentine
* Robert G. Valentine, Jr.
Joseph P. Ward
* James R. Weber
* Mrs. James R. Weber
Frank M. Westerfield, Jr.
Alonzo D. Williams
C. David Williams
* Ronald N. Williams
* Thomas H. Wortham
Ruel N. Wright
Paul W. Zelnick

Saline County
* Dan R. Gardner
* Mariann Harrington
* Edward B. Hill
* Marvin N. Kirk, Jr.
* Frank G. Thibault, Jr.
* Bill R. Thomas

Sebastian County
Jimmie G. Atkins
Mrs. Jimmie G. Atkins
* Calvin Cassidy
* Robert L. Chester
Homer G. Ellis
Gary V. Felker
* Archie L. Hewett
* William A. Holman
James T. Howell

Teresa H. Hunton
 * Peter J. Irwin
 Thomas C. Kelly
 Mrs. Thomas C. Kelly
 A. Samuel Koenig, III
 Mrs. A. Samuel Koenig, III
 * Albert S. Koenig, Jr.
 * R. Paul Kradel
 * Mrs. Kemal E. Kutait
 * Ken E. Lilly
 Everett C. Moulton, Jr.
 Michel Muylaert
 * Steven Nelson
 * W. P. Phillips
 * Mrs. Taylor A. Prewitt
 Robert L. Sherman
 Mrs. Robert L. Sherman
 Robert J. Thompson
 * Roy E. Vanderpool
 * Paul I. Wills
 * Morton C. Wilson
 * Munir M. Zufari

Sevier County
 Jonathan L. Hoyt

St. Francis County
 * Ralph M. Bard

Tri-County
 David E. Ducker
 A. Meryl Grasse
 * Michael N. Moody
 James F. Smith

Union County
 * Kenneth Duzan
 Wayne G. Elliott
 Durwood W. Flournoy
 * W. John Giller, Jr.
 Diana T. Jucas
 J. Schuler McKinney
 A. Wade Parker
 * Robert L. Parkman, Jr.
 Mrs. Robert L. Parkman, Jr.
 Allan S. Pirniquie
 Joe F. Turnbow
 Srinivasan
 Dileepkumar R. Vyas
 * George W. Warren
 James B. Weedman

Larkin M. Wilson, Jr.

Washington County
 * Spencer D. Albright, III
 Jack D. Alston
 Stanley C. Applegate, Jr.
 Mrs. Stanley C. Applegate, Jr.
 James A. Arnold
 * James F. Cherry
 David R. Crittenden
 David A. Davis
 Ted J. Fish
 John Ginger
 * Benjamin Harrison Hall
 (nonmember)
 * Martha Hutson
 * John H. Kendrick
 * C. R. Magness
 Linda A. Markland
 James E. McDonald, II
 Mrs. James E. McDonald, II
 Mr. Garry McGhee
 * William C. Mills, III
 J. Warren Murry
 Lee B. Parker, Jr.

Charles W. Patterson
 Mrs. Charles W. Patterson
 * John R. Power
 * Earl B. Riddick, Jr.
 * Dan M. Riner
 * David L. Rogers
 John B. Weiss

White County
 * Daniel S. Davidson
 S. Clark Fincher
 * David L. Hatfield
 * John C. Henderson
 * Eugene A. Joseph
 * Robert D. Lowery
 * E. Lloyd Norris
 * Porter R. Rodgers, Jr.
 * Larry W. Weathers
 * W. Curtis Williams

Yell
 Gene D. Ring

*Sustaining members (contributed \$99.00 or over)

Committee on Medicine and Religion

Fred O. Henker, III, M.D., Chairman

The committee organized and presented the Prayer Breakfast at the annual meeting of the Arkansas Medical Society in Fayetteville on Sunday, April 26, 1987. The devotional was delivered by Reverend Tom Cole, Chief of Chaplains and Director of Pastoral Care and Education, Memorial Hospital Systems, Houston, Texas. Special music was presented by David Hogan, Minister of Music, First Baptist Church, Fort Smith, Arkansas.

Immediately following the Prayer Breakfast a seminar, "A Time to Live, A Time to Die", was moderated by Dr. W. D. White, Distinguished Professor of Humanities, St. Andrews Presbyterian College, Laurenburg, South Carolina. In addition to Dr. White, the panel included Mrs. Mary Waterman, a nursing instructor at the Garland County Community Center in Hot Springs, Dr. Joe B. Hall, an internist from Fayetteville, and Reverend Tom Cole.

On Saturday, July 18th, the committee sponsored a colloquium entitled, "Human Reproductive Technologies - Ethical, Legal, and Public Policy Issues" at the Baptist Medical Center in Little Rock. The colloquium, also moderated by Dr. White, included participants from the legal, ministerial, and medical professions. A workshop concept was employed using multidisciplinary groups of ten to twelve.

The committee is presently working on a religious program for Sunday, April 24th. The program will include a musical devotion and a symposium on "Are We Our Brother's Keeper?".

Maternal and Child Welfare Subcommittee

Robert H. Fiser, Jr., M.D., Chairman

The Maternal and Child Welfare Subcommittee would like to propose the following statements to be considered by the Council and supported by the Arkansas Medical Society.

In an attempt to solve the problems of indigent health care, priorities should be given to mothers and children as the most cost effective way of solving major long-term problems in regard to potential for the future.

One of the most important aspects would be to enhance Medicaid coverage to save state dollars with the Medicaid match. These babies should be covered up to 200% of the poverty level. This would include the pregnant mother and her children up to the age of five. Inherent with the increase in the use of Medicaid would be the development of a regionalized system for mothers and children which we have discussed in the past. This would designate levels of care and enhance quality at all levels throughout the state. Some of the earliest implementation of these programs should begin in some of the highest targeted areas.

A close cooperation with medical education should be inherent in each of these areas and even closer coordination with the Health Department should be emphasized.

I feel that these points should be supported and would enhance our whole commitment to mothers and children in the state. It would also benefit every practicing physician in the state of Arkansas as well.

Committee on Membership Benefits

John M. Hestir, M.D., Chairman

The Committee on Membership Benefits has been active during 1987. The philosophy of the Committee is to identify services that are needed and valuable to AMS members and then to develop a way to provide those services in such a way that is ethical, reputable, and cost effective. A survey of the Arkansas Medical Society members was conducted to determine the level of interest in various programs that the Committee might recommend. As a result of this survey, the Committee is currently looking into arrangements that would provide group purchasing for medical and office supplies, office computer systems, group travel opportunities, and a magazine subscription service. The overwhelming majority of physicians responding to the survey indicated a great deal of interest in the Society providing these type of services.

A small number of respondents to the survey questionnaire expressed concern about the Society becoming involved in commercial businesses or using Society dues to fund these types of programs. The Committee wishes to point out very clearly that any new services provided will be supported by charges made for using the services and not by dues or other assessments. In most cases, the extent of the Society's involvement will be that of endorsing a particular program rather than trying to "go into business for itself".

The survey indicated that a great deal of interest exists in the Society providing various types of insurance programs. These programs are being addressed by the Society's Committee on Insurance.

I would like to thank the members of the Medical Society for taking the time to complete and return the survey questionnaire and would also like to thank the members of the Committee for taking time out of their busy schedules to serve on the Committee.

Report from the Trustees of the Pension Plan

Rhys A. Williams, M.D., Chairman

The Trustees of the Arkansas Medical Society Employees Pension Plan met on two occasions in 1987. The trustees reviewed the investment strategy of the pension funds managed by Worthen Bank. Since the former employees of the Society in Fort Smith have now had an opportunity to withdraw their vested interest in the plan, the trustees advised discussions with Worthen Bank about changing the investment strategy from purely short-term fixed rate securities.

The trustees reviewed several alternative proposals made by Mr. Aubrey L. Avants, Senior Vice President of Worthen Asset Management. They have recommended the investment strategy option suggested by Mr. Avants.

The option endorsed by the trustees was:

"Diversify the portfolio using both fixed income and equities. This eliminates being subjected to only one phase of the market. The major purpose of this plan is to give a continuous rate of return year after year. It will contain five equity funds and two fixed income funds. The amount of stocks and bonds held is based on a timing model. I recommend a 60% stock/40% bond mix for your plan."

The recommendations were approved by conference call on October 20, 1987. Shortly thereafter, Mr. Avants was notified of the trustees decision and the program was implemented. It should be noted that this was right after the large decline in the stock market in October, 1987.

I would like to take this time to thank the members of the Pension Plan for their time and effort. The trustees of the Pension Plan are Glen F. Baker, John M. Hestir, James F. Kyser, and James M. Kolb.

First Councilor District

Professional Relations Committee

Bascom P. Raney, M.D., Councilor

The First Council District of the Professional Relations Committee was assigned three cases during 1987. One was thought to represent fraud and was referred to the State Medical Board. The remaining two cases were eventually resolved without the recommendation of any disciplinary actions.

Second Councilor District

Professional Relations Committee

Clarence W. Jackson, M.D., Councilor

There has been no activity for the year of 1987 relative to the Second Councilor District of the Professional Relations Committee.

Third Councilor District

Professional Relations Committee

John M. Hestir, M.D., Councilor

The Third Councilor District of the Professional Relations Committee has not had any problems, complications, or reports of professional relation problems during the last year.

Fifth Councilor District

Professional Relations Committee

C. E. Tommey, M.D., Councilor

The Fifth Councilor District of the Professional Relations Committee has not received any complaints during the year 1987, and, therefore, has not had to take any action.

Sixth Councilor District
Professional Relations Committee
Frederick E. Joyce, M.D.

The Sixth District Council District of the Professional Relations Committee has not received any complaints during the last year, therefore, has nothing to report.

Tenth Councilor District
Professional Relations Committee
Samuel E. Landrum, M.D., Councilor

The Tenth Councilor District of the Arkansas Medical Society's Professional Relations Committee has had one complaint for evaluation and response.

The mother of an injured patient who arrived at the emergency room along with other patients from the same accident complained that the physician who attended them was rude and unprofessional. This incident was evaluated extensively, and the committee found that her complaints were based primarily on fact.

The involved physician was advised of our opinion and encouraged to be more considerate of families when attending the injured although we realize the circumstances were stressful. The lady who complained was advised of our findings.

Committee on Public Health
Don G. Howard, M.D., Chairman

The Committee on Public Health met on January 23, 1988. Attending the meeting were Don Howard, Chairman, Ben N. Saltzman, A. S. Fitzhugh, and Sam Schultz. The committee recommended the following:

Support all educational and other activities that are proposed by the Committee on AIDS of the Arkansas Medical Society and all activities of the Division of Public Health, Arkansas Department of Health.

Encouraged area schools, statewide, to cooperate with local public health offices in their educational endeavors to reduce teenage pregnancies.

Continue to encourage the populace to become immunized and support all immunization programs.

Promote the establishment of a Nurse Midwife Program, and to support the Department of Public Health in the implementation of this program according to their rules and guidelines.

Continue to support legislation for the implementation of seatbelt laws as recommended by the Arkansas Medical Society.

I would like to personally thank all members of the Public Health Committee who have worked untiringly during the year to promote all educational and administrative activities of the Public Health Committee.

Arkansas Medical Society
Medical Student Section
Lawrence H. Meyer, President

Nineteen hundred and eighty-seven brought the largest crowd yet to an Arkansas Medical Society Medical Student Section sponsored meeting. Eighty people from the College of Medicine, Pharmacy, Nursing, and Dental Hygiene came out to learn "What Health Care Professionals Need to Know About AIDS" from Dr. William Jones. Dr. Jones, the Chairman of the Arkansas Medical Society Committee on AIDS, emphasized the need for education, understanding, and of course, common sense precautions to a crowd that was anxious for practical information.

Also this past year, the President of the Medical Student Section, Lawrence Meyer, served as a voting delegate at the American Medical Association Medical Student Section meeting in Chicago and at the interim meeting in Atlanta. Topics and resolutions discussed by the student delegation in Atlanta included medical student immunity from professional liability lawsuits, in what capacity the HIV seropositive physician should continue to practice, and the right of refusal. One high point of the Atlanta meeting was a luncheon with the U. S. Surgeon General who spoke on his opposition to the right of refusal and emphasized the oath of Hippocrates.

Future plans for the Medical Student Section include officer elections in the spring and a medical/legal forum on malpractice and liability insurance. Speakers at the forum will include representatives of the medical and legal professions as well as the insurance industry. We are also planning a very special program concerning a case study covered each year in the freshman ethics class. The case involves a young man with injuries consisting of third-degree burns over 67% of his body. He pleaded with his physicians to withhold treatment and allow him to die. The case study chronicles the patient's painful treatments and his eventual survival. Although he survived well enough to obtain a law degree, he still maintains his wish to die should have been respected. The case study is a disturbing one that stays with us throughout our medical education. The young man currently lives in Texas and has agreed to come to Little Rock and speak to the Medical Student Section. The Arkansas Medical Society is providing funding through the Medical Education Foundation for Arkansas (MEFFA) and we are deeply indebted to them for doing so.

The Medical Student Section would like to thank the Arkansas Medical Society for its support and look forward to another successful year.

Medical Education Foundation
for Arkansas

Martin Eisele, President

The Medical Education Foundation of Arkansas con-

tinues to give financial assistance to the University of Arkansas School of Medicine primarily by funding up to ten lectures a year by visiting experts in medical related fields. The following lectures are scheduled for the school year 1987-1988:

- Psychoneuroendocrinology in Depression
Jay D. Amsterdam, M.D., University of Pennsylvania
- The U. S. Drug Scene: An Overview
Charles R. Schuster, M.D., Director, National Institute for Drug Abuse
- Cutaneous Immunology
Mark Dahl, M.D., Professor of Dermatology, University of Minnesota Medical School
- Congenital Heart Disease
Thomas J. Imray, Professor and Chairman, Department of Radiology, University of Nebraska College of Medicine
- Surgical Correction of Anomalies of the Vagina and Perineum
Winfred Wiser, M.D., Professor and Chairman, Department of Obstetrics and Gynecology, University of Mississippi School of Medicine
- Temperature Regulation, Infection, and Fever
Charles A. Dinarello, Ph.D., Associate Professor of Medicine, Tufts University School of Medicine
- Evolutionary Interrelationship of Retroviruses and Growth Factors
Russell F. Doolittle, Ph.D., Professor of Biochemistry, University of California at San Diego
- Sleep Mechanisms
Allan J. Hobson, M.D., Director, Laboratory of Neurophysiology, Department of Psychiatry, Harvard Medical School
- Brain Transplants
Willis Brown, M.D., Professor of Neurosurgery, University of Texas Medical School at San Antonio

Appreciation to the Society is expressed by letters of thanks from the different department heads of the medical school.

Recently the Arkansas Medical Society Medical Student Section asked for financial support to bring in a lecturer who had survived severe burns to discuss his views on "The Right to Die" issue. This ethical issue is of marked interest to the students and MEFFA was pleased to support this project.

Your continued support in contributions to the MEFFA is appreciated.

Arkansas State Medical Board
Joe Verser, M.D., Secretary/Treasurer

The officers and members of the Arkansas State Medical Board are W. Ray Jouett, Little Rock, Chairman; Bascom P. Raney, Jonesboro, Vice-chairman; Joe Verser, Harrisburg, Secretary/Treasurer; George F.

Statement of Revenue, Expenditures, and Changes in Fund Balance		
Years Ending June 30th, 1987 and 1986		
	1987	1986
Revenues		
Registration Fees	\$152,007	\$134,883
Reciptocities	41,430	25,335
Examinations	48,200	34,900
Therapist dues and fees	12,377	9,027
Temporary permits	17,375	15,115
Medical corporations	9,355	9,355
Interest income	18,980	18,351
Other	4,217	6,517
	\$303,941	\$253,483
Expenditures		
Salaries	\$71,418	\$68,172
Payroll taxes	8,923	11,657
Board Meetings	16,126	22,517
Office expense	20,435	22,038
Exams	38,119	12,129
Legal and accounting	36,810	28,373
Other	15,800	13,024
	\$207,631	\$177,910
Excess of revenues over expenditures	\$96,310	\$75,573
Fund balance, beginning of year	\$351,167	\$275,594
Fund balance, end of year	\$447,477	\$351,167

Wynne, Warren; John F. Guenthner, Mountain Home; Vernon H. Carter, Rogers; Warren M. Douglas, Little Rock; Alonzo Williams, Little Rock; James L. Gardner, Hot Springs; Jim E. Lytle, Batesville; Mr. John B. Currie, Sr., Wilmot; Mr. Dewey Lanthrip, Little Rock; and Mr. Paul Ward and Mr. Mike Mitchell of Little Rock, attorneys for the Board.

The Board investigated every case of violations of the Medical Practices Act and every complaint filed against physicians which were reported to the secretary during the year. Our office was able to successfully arbitrate a number of these complaints. The largest number of the complaints continue to be alleged overcharging by physicians.

The Arkansas State Medical Board has published a 1987 directory which gives an up-to-date listing of the physicians licensed by the Board. The Arkansas State Medical Board will hold a Public Hearing in the near future relative to a regulation on the use of Chelation Ther-

apy by physicians. Any physician wanting to testify relative to the merits or dangers of Chelation Therapy are welcome. When the date of the hearing is set it will be made available to the Medical Society office with the hope that it can be published in the *Journal of the Arkansas Medical Society*. Any written statements to this Board on this subject will be presented at the public hearing.

The legal firm of Mitchell and Roachell now represents the Arkansas State Medical Board.

Legislation will be proposed by the Board at the next legislative session which would increase the intern and residency training required of foreign graduates from one year to three years in an approved United States hospital before becoming eligible for an Arkansas license.

The Arkansas State Medical Board licensed 120 physicians by examination, 97 by reciprocity, and 72 by national boards during the year. The following is a summary of the Board's proceedings:

Physicians registered for 1987: 3,677 resident
2,615 non-resident

Physicians certified to other states: 152

Licenses revoked for nonpayment of annual registration fees: 75

Licenses suspended for nonpayment of annual registration fees: 137

Licenses suspended for violation of the Medical Practices Act: 2

Cases pending for violation of the Medical Practices Act: 6

Physician's D.E.A. privileges surrendered: 1

University of Arkansas College of Medicine

I. Dodd Wilson, M.D., Dean

Nineteen hundred and eighty-seven was a year of transition for the College of Medicine. In addition to the appointment of a new dean, the college developed a six-year plan. The plan calls for enhancing the academic environment through an emphasis on increased research, continuing our role as a major health care resource for the state of Arkansas, and providing additional educational opportunities for both undergraduate medical students and graduate students in clinical medicine and the basic sciences.

Specific accomplishments during the past year include the following:

Development of a new grading policy which affirms the importance of maintaining strong minimum standards, but also recognizes the need for students to strive for maximum performance and to be rewarded appropriately. The major impact of this policy is that the average grade of "C" is no longer mandated for a course.

A proposal was approved that would require all students in the College of Medicine to take the National

Board Medical Examination Part I Candidacy Examination after successful completion of their sophomore year. A passing composite score will be required before entering the junior year. This policy will be placed in effect for the class of freshmen students that entered in the fall of 1987.

The faculty approved and implemented an AIMS Program (Aid for Impaired Medical Students) directed toward students with problems with potentially addictive drugs. Students and faculty members were selected to serve on the AIMS Council and potential therapists from the Little Rock area were identified. A brochure was prepared and distributed to medical students in the fall.

A new Academic Counseling Program was implemented. Emphasis was placed on prevention, not rehabilitation. After exams, students are identified who need additional academic counseling.

The Liaison Committee on Medical Education (LCME) conferred continuing accreditation on our college for a period of five years. The report of the LCME stated numerous praise-worthy findings and expressed concern regarding our class size, the design of the curriculum for the second year, and the lack of computer facilities for the administration of the College of Medicine.

All students of the class of 1987 passed both parts of the FLEX examination, which made Arkansas the only state having a 100% pass rate.

The year saw continued progress towards strengthening the environment for research and scholarship in the University of Arkansas College of Medicine. Many new and competing grants were funded. Research expenditures derived from sources other than the Veterans Administration have doubled in the past three years.

The nuclear magnetic resonance research facility was completed and opened.

Ground was broken for the Arkansas Cancer Research Center.

The faculty continues to provide essentially all the medical care at three major hospitals with a total of over 2,000 beds. This constitutes a major resource for Arkansas. The College is committed to continual enhancement of health care programs.

The Ambulatory Care Surgery Center at the University Hospital of Arkansas was opened.

A \$1 million matching grant from the VA was acquired to build a center to treat cardiovascular arrhythmias and other cardiovascular problems.

Staff physicians served in the following offices during 1987: Joseph H. Bates, President-elect, American Thoracic Society; Ernest J. Ferris, Secretary/Treasurer, Society of Chairmen of Academic Radiology Departments and as President, Society of Thoracic Radiology; H. Ernest Walker, Jr., President, Association of Clinical Chemists; Richard F. Jacobs, Secretary/Treasurer, Society of Pediatric Research; Lawrence A. Scheving, President, International Society of Chronobiology; Franklin C.

Miller, Secretary/Treasurer, Society of Perinatal Obstetrics; Frederick R. Jelovsek, President, American Association for Medical Systems and Information; Richard B. Clark, President, Society for Obstetric Anesthesiology in Perinatology; Kurt Henle, President, North America Hyperthermia Society. Also Richard V. Ebert received the American College of Physicians' Distinguished Teacher Award.

Future plans for the College of Medicine include a major thrust to enhance the quality and quantity of research being conducted. The present impediment is the absence of a modern research facility. A new research building is essential for growth in scholarship at UAMS. This building would contribute not only to the quality of research at UAMS, but also to the continuing enhancement of the quality of health care in Arkansas and to economic development in the state.

Another plan is to recruit applicants to the medical school. Nationally, the number of applicants to medical schools has fallen precipitously, jeopardizing the overall high quality of students admitted to medical schools. The college is developing a plan to interest outstanding people in a medical career and to recruit them to UAMS.

The curriculum is being reviewed and revised to enhance the content and to strengthen the commitment of students to maintain competence during patterns of life-long learning. Recently the faculty voted to rearrange the second-year curriculum which will correct a major deficiency noted by the Liaison Committee on Medical Education. The faculty in the basic sciences are committed to major strengthening of graduate programs to double the number of graduate students during the next few years.

The clinical faculty will continue to develop new health care programs which add to the quality of life for all Arkansas. Efforts will be made to enhance the already productive affiliations with the Arkansas Children's Hospital and the Veterans Administration Hospitals. In addition, the College is committed to develop an affiliation agreement and a stronger collaborative effort with the National Center for Toxicological Research.

As a new Dean, I have found the school to be in good shape, headed toward achieving new goals. We are making progress at an increasingly rapid rate. The University of Arkansas College of Medicine is an institution of which the Arkansas Medical Society can be proud.

The Arkansas Department of Health

M. Joycelyn Elders, M.D.

Nineteen hundred and eighty-seven was another year of challenge for public health in Arkansas. I am proud to say that I joined that challenge on October 1 as the Director of the Arkansas Department of Health. The public health issues facing Arkansas are complex and varied.

A collaborative effort of the public and private sector will be required to develop solutions to our public health problems.

As I begin my directorship, I am establishing task forces to assist me in three critical areas: long-range planning; environmental and occupational health and safety; and adolescent pregnancy prevention. To effectively address the state's health needs, we must develop plans that set clear priorities and maximize finite resources. We must continually work to protect our environmental health and promote health and safety in the workplace. Finally, the problem of adolescent pregnancy is one we cannot afford to ignore. We must intensify our efforts to reduce adolescent pregnancy and its attendant consequences.

I would like to express my appreciation and admiration for the staff of the Arkansas Department of Health. As I underwent my orientation to the Department this year, I was continually impressed with the professionalism and dedication exhibited by everyone in the state and county departments. This report represents the accomplishments of many individuals dedicated to the goals of health promotion and disease prevention.

Bureau of Community Health Services

Jim Mills, Acting Director

The Bureau of Community Health Services (BCHS) is responsible for the administrative direction and supervision of all field services, personnel, and resources through ten area offices and ninety-six local health units. The following information delineates the major accomplishments of 1987.

The 1987 General Assembly passed Act 633 authorizing us to begin collecting a \$2.00 record maintenance fee from each client receiving clinical services through the local health unit. The record maintenance fee system was effective July 20, 1987. The average collection rate since the inception of the record maintenance fee has been 90%, although no one is refused service due to inability to pay. This indicates the willingness of our clients to pay the \$2.00 fee. Funds collected from this fee will be used to offset the losses incurred in the budget cuts of 1986-87.

In June, a computer program was developed for local health unit fee collections and fiscal accountability. This program was successfully piloted in the Conway County Health Unit for three months. Plans are underway to install microcomputers in all local health units by June 30, 1989.

Funds again became available in 1987 through the Arkansas Industrial Development Commission (AIDC) for construction and renovation of public health facilities. Area management and local health unit staffs worked closely with local government officials and community

leaders in preparing the grant applications. Ten counties or cities submitted grant applications for construction of new facilities or renovation of existing local health unit facilities. Final approval of these applications is still pending.

The Arkansas Department of Health and the Arkansas Department of Human Services took full advantage of OBRA-86 authority and implemented presumptive eligibility in local health units on April 1, 1987. Implementation was exceptionally smooth with positive collaboration among the field staffs of local health units and local human services offices.

Management evaluations were conducted on many local health units by either central office or area personnel. A representative from the Division of Public Health Laboratories was added to the central office management evaluation team. Improvements continue to be made in the area of fiscal accountability, inventory, record-keeping, personnel management, and facilities for the handicapped. However, these evaluations continue to indicate that many local health unit facilities are in need of significant improvements. Many lack adequate space for the staffs housed there and the number of patients routinely seen in the units.

Due to budget cuts, the Area II Management Office in Harrison was eliminated in April. This resulted in the loss or relocation of six employees.

The Bureau of Community Health Services continued its program of in-service training for its 80 local health unit administrators. A staff development meeting was held in October. This meeting included four discussion groups in which the administrators discussed current problems and formulated possible solutions. The feedback received from the administrators following these discussions will be very helpful to BCHS in determining future direction for operational improvements.

Bureau of Health Resources

A. Stuart Fitzhugh, M.D., Director

DIVISION OF HEALTH EDUCATION AND PROMOTION

Health educators worked in Child Health, Maternity, Family Planning, Risk Reduction and Healthy Beginnings programs. Over 600 educational classes, clinics, presentations and workshops were conducted in 1987. Staff represented the agency on many boards and committees. Other activities included:

State Health Education Conference and Governor's Award for Health Education and Promotion

Health Education and Promotion (HEP) sponsored the Fourth Annual State Health Education Conference in Little Rock last November. Two hundred health professionals attended. Governor's Health Education and Pro-

motion Awards were given to outstanding school, worksite and community programs.

Promotional Packages

HEP developed 12 promotional packages. All local health units received the packages to give to local media.

School Health Workshops

HEP sponsored School Health Workshops in 8 management areas. Four hundred and six school personnel attended.

School Counselor Workshop

HEP presented an exhibit booth at a School Counselor Workshop in Hot Springs. Between 600 and 800 people visited the booth.

Smoking Cessation

HEP held four "FreshStart" trainings to orientate 24 volunteers on how to conduct stop smoking programs. HEP arranged 4 stop smoking programs for State Health Department employees with 4 quitting.

Health Education Week

The Governor proclaimed Health Education Week as November 2-6. HEP developed a planning guide and over 500 junior and senior high health teachers were given the guide. Posters, news articles and pictures from the 1985 Health Education Week were displayed at the State Health Education Conference.

Association for Fitness and Business Sixth Annual Regional Conference

A two day convention was held at the Excelsior Hotel, Little Rock, for worksites interested in health promotion from a four state region. HEP generated \$3,000 by soliciting exhibitors to display their products and services.

Resource Center

The Center distributed 85,000 pamphlets and 15,000 requests for informational or promotional materials, and 1,500 audiovisuals. The Center loaned 550 pieces of equipment.

DIVISION OF MEDICAL SOCIAL SERVICES

The first priority for the division was services for adolescents. The division received a grant to work with adolescent parents. The grant received from the Department of Health and Human Services was one of fifteen projects in the country. The Division also helped prepare the case management part of a proposal to the Annie Casey foundation for a \$7.5 million grant to work with high risk youth.

The second priority was social work services for high risk maternity patients. Counseling was begun and reimbursed through Medicaid as part of the statewide Good Beginnings projects.

The third priority was domestic violence. An extensive child abuse media campaign was done. A statewide conference on child abuse prevention was co-sponsored, and training for Health Department staff on identification of families at risk for possible abuse was done.

The Division continued to provide counseling to patients being tested for HIV exposure, parents of UAMS intensive care nursery infants, and child health patients.

DIVISION OF PUBLIC HEALTH NURSING

The Division worked with an Arkansas Department of Health committee to address competitive nursing salaries and shortage of nurses. The Career Ladder committee was reorganized to define a career ladder for public health nursing to compliment recruiting and retention of public health nurses. The nursing staffing formula was refined.

All public health nurses in the state were briefed on goals of the Nursing Division for 1988. A nursing committee was formed to develop a quality assurance policy for public health nursing practice. A nursing committee was developed to review and draft public health nursing policies and procedures.

A one-day workshop was held for public health technicians to update their skills.

The Division participated in planning and implementing the Good Beginnings program statewide.

Two vacant positions in the Division of Nursing were filled: the Assistant Director of Nursing and the In-service Director. The Division promoted Local Health Units' purchasing and utilizing VCRs for in-service and education.

DIVISION OF NUTRITION SERVICES

Presentations to the public increased to 244 (30%). These included private industry, civic groups, schools, health fairs, churches, other government agencies, health groups, newspapers, health career students, general public requests for information, medical camps and parenting class series. KATV "For Kid's Sake" highlighted some activities for pregnant adolescents while Little Rock BET Channel 14 covered some general teen nutrition issues. We have provided faculty and curriculum to 14 dietetic interns from UAMS.

Client referrals from private physicians rose by 25% to 332 while consultation about and/or visits with home health patients went up by a third to 97.

To help our agency personnel broaden their knowledge and provide a consistent message to clients, nutrition staff worked with nursing and WIC administrative assistants through both group and individual sessions. This activity increased 200% to 55 contacts. Nutritionists and home economists counseled 7,700 maternity patients and 10,100 parents regarding infant and child nutrition.

Our staff did not neglect their own need to improve their expertise. Two members became Certified Home Economists. Three attended training programs regarding nutritional concerns of chronically ill and handicapped children. Others were able to attend a Head Start Con-

sultants program, the American Dietetic Association Annual Meeting, and various in-state professional conferences. Other staff accomplishments include:

- Our director was named Outstanding Dietitian of the Year by the Arkansas Dietetic Association and received an Outstanding Service Award from the Regional VI Department of Health and Human Services director.
- One of our staff was named the Recognized Young Dietitian of the Year by the Arkansas Dietetic Association.
- One of our staff had a feature article published in *The Journal of the Arkansas Medical Society*.
- Two staff provided consultation and training to the UALR REAP project.
- One staff member was both a co-chairman and speaker at a Bi-Regional (Regions IV and VI) conference concerning special needs children.

DIVISION OF PHARMACY SERVICES

Three hundred and fifty-two investigations of legitimate drug handlers were conducted. Licensing Board action and/or cease and desist orders against 277 persons resulted. This was a 326% increase over 1986. The Division destroyed two million dose units of controlled substances that were submitted by hospitals, long-term care facilities, physicians, dentists, veterinarians and law enforcement agencies.

Pharmacy Services provided by local pharmacists in each of the 96 public health units continued to be audited by the Division to assure safe and effective drug use by patients of the public health clinics.

The Division received a contract from the FDA to conduct investigations of illegal diversion of veterinary prescription drugs to aid in the reduction of drug residue on food animals.

The Director held public hearings and appeared before the Legislative Council and professional boards to schedule controlled drug and promulgate regulations to aid in the enforcement of drug laws. He participated in several national meetings pertaining to the scheduling of controlled drugs; enforcement of drug laws and represented the Governor at a DEA National Conference. As a clinical instructor at UAMS, he trained senior pharmacy students in Public Health.

Despite staff losses, the Division has provided services involving 13,436 legitimate handlers of controlled drugs by using prudent case management practices.

OFFICE OF POLICIES AND PROCEDURES

The Office of Policies and Procedures, in coordinating with the Bureau of Environmental Health Services, completed the Laboratory Services Volume of the Arkansas Department of Health Policies and Procedures

Manual. This volume contains policies, procedures, forms, and instructions pertaining to 20 sections of Arkansas Department of Health Public Health Laboratories. Policies and Procedures copied, assembled, and distributed 120 Laboratory Services volumes.

The Office of Policies and Procedures assisted the Immunization Program in revising their policies, procedures, forms and instructions. This created the Immunization Volume of the Arkansas Department of Health Policies and Procedures Manual, which will be distributed in January, 1988.

In addition, this office:

- conducted eight workshops on manuals for field and central office personnel.
- helped coordinate and finalize policies for the Good Beginnings program.
- assisted in revising Personal Care Program policies when the program was implemented statewide.
- worked with Local Health Unit Management Evaluation Teams to audit manuals (policy and records) and memo files.
- maintained schedule of transmittals with distribution and effective dates to provide overall picture of policy changes within the Agency.
- provided technical assistance for and distributed approximately 88 transmittals (policy changes) and 125 Agency-wide memorandums.

DIVISION OF RECORDS AND CLERICAL SERVICES

A records maintenance fee was implemented in local health units. The Division worked with Data Processing on the computer pilot of this system in Morrilton. The pilot was successful; and we will be placing computers (for collecting fees) in local health units during 1988.

Medicaid presumptive eligibility was implemented.

Staff members assisted with the development of a Central Supply Catalog. Everything from Central Supply is now ordered on one form.

Central Office personnel assisted Records and Clerical Supervisors with WIC voucher issuances by local unit clerks.

The Division worked with the paperwork committee in an effort to decrease paperwork in local health units. Some progress was made; the committee will continue through 1988.

Efforts were continued to properly classify local health unit clerical staff. Considerable progress was made. Computerization of local health units may require new classifications in local health units in the future.

Assistance was provided to all divisions and programs on developing/revising forms, writing instructions, and developing clerical procedures.

Bureau of Environmental Health Services

Jerry G. Hill, Director

DIVISION OF ENGINEERING

The Division of Engineering saw the passage of Act 95 of 1987. This law, which sets up service fees, allowed the Arkansas Department of Health to collect approximately \$291,000 out of a total \$294,000 billed. This was a compliance rate of 98.9%.

Revisions to the Plumbing Law were made by the 1987 Legislature. Most of the changes have been implemented by the adoption of new and revised regulations by the Board of Health. A new Plumbing Apprenticeship Law was passed which set out specific requirements for developing Rules and Regulations for the Apprenticeship Program.

A Memorandum of Understanding with the Department of Pollution Control and Ecology was signed. Additional agreements with PC&E on handling permit applications were reached and initiated.

DIVISION OF HEALTH FACILITY SERVICES

The year 1987 was fairly routine for the Division of Health Facility Services. The most important accomplishment was the approval by the Legislature to charge fees for some new programs and increase fees in other programs. With funds from these fees, the Division may inspect Health Maintenance Organizations and perform state licensure inspections for Home Health Agencies. Other programs will be maintained at a continuing level.

The Rules and Regulations for Hospitals and Related Institutions were presented to the Board of Health. A public hearing was held January 11, 1988. This project has been ongoing for 2 years.

DIVISION OF PUBLIC HEALTH LABORATORIES

Private water samples and asbestos samples testing was reinstated on May 1, 1987. From May 1 to December 31, 3,438 private water and 62 asbestos samples were tested.

Several tests previously performed were deleted by the division due to the low volume requested, cost ineffectiveness and lack of need by the Agency's various programs. These tests were: lactate dehydrogenase (LDH), urinalysis, serum cholesterol, total serum proteins, chlorides, potassium, sodium, and calcium. A new test, occult blood, was added.

Several major equipment purchases were made, totalling \$255,742. Some of these purchases were to replace old equipment.

DIVISION OF RADIATION CONTROL AND EMERGENCY MANAGEMENT

Act 504 of 1987 amended Act 8 of 1961 (the Ionizing Radiation Control Act) to authorize the Agency to charge and collect annual fees for licensing and registration of sources of ionizing radiation. Revenues thus generated funded additional Health Physicist positions, which will enhance the effectiveness of the division's programs.

The second annual Region VI Radiological Emergency Preparedness Conference was held in Little Rock on April 22-24, 1987. The conference, which was co-hosted by the Federal Emergency Management Agency (FEMA) and the State, marked the first time that FEMA has allowed a state to participate in the planning and execution of such a conference. This project was so successful that future joint conferences are being planned, and the concept will be used for other FEMA regions.

The State's Radiological Emergency Response Plan in Support of Arkansas Nuclear One (Annex V to the Arkansas Emergency Operations Plan) was revised in its entirety effective July 1, 1987, as were the Radiological Emergency Response Plans for the five counties in the emergency planning zone around ANO.

During the year Governor Clinton appointed Division Director Greta Dicus as the Arkansas Member of the Central Interstate Low-Level Radioactive Waste Compact commission (CICC), which includes the states of Arkansas, Kansas, Louisiana, Nebraska, and Oklahoma. Ms. Dicus and her staff were involved throughout the year in activities, including a number of legislative and public meetings, concerning the low-level radioactive waste management issue. On December 15th Nebraska was chosen as the host state for the Compact's disposal facility.

A contract between the Health Department and the Department of Human Services Office of Deaf and Hearing Impaired was negotiated and implemented, which has enabled the division's 24-hour Emergency Communications Center to provide a statewide communications relay service for the deaf and hearing impaired. Using state-of-the-art telecommunications equipment, the operators are able to relay telephone messages, e.g., making and confirming medical appointments, and perform other communications services that help to bring deaf citizens into the mainstream of life.

DIVISION OF SANITARIAN SERVICES

Representatives of the division were involved in Multi-State chlordane meetings during the year in efforts among members of states bordering the Mississippi-Missouri River System to address problems arising from increasing levels of chlordane in fish. Another meeting is scheduled in 1988 to address areas such as uniform sam-

pling procedures, laboratory analysis, product recalls, etc.

The Division was active during the 1987 legislature in lobbying for either the creation of permit fees or the increase of existing fees. Division staff developed and proposed four bills, which were food establishment permit, food salvage permit, manufactured milk permit and ice permit. Of the four bills proposed, one was defeated (ice permit). It is anticipated that the division will collect approximately \$178,000 as a result of these fees.

New regulations were promulgated in the areas of Sewage Disposal Systems, Designated Representatives and Installers. Regulations Pertaining to Swimming Pools or Other Related Facilities were upgraded.

Sanitarian Services was instrumental in formulating a Memorandum of Agreement between the Department of Health and the Department of Pollution Control and Ecology outlining the jurisdictional roles of the two departments in the area of domestic waste disposal facilities. The agreement was necessary to reduce the duplication of services between the two agencies.

A Housing and Urban Development (HUD) Lead Testing Program was implemented, resulting in a total of 47 public housing projects in 32 different cities being tested for the presence of lead base paint. This came to a total of 428 separate units inspected with approximately 7,000 miles traveled to complete the program. Also 32 private homes in the Little Rock area which are rented by HUD were tested. This is an on-going project and will continue into 1988.

The division renegotiated with FDA regarding the contract food service establishment inspections and increased inspections from 195 to 250.

The Food and Dairy Products Section was reorganized, consolidating the FDA Contract Section and responsibilities into one section. The reorganization involved losing two full-time positions from the two combined sections while maintaining and increasing services.

The Rules and Regulations Pertaining to Manufactured Milk and Inspection forms were amended.

The statewide ice milk sampling program was evaluated, and a reduction in the sampling program was instituted from once a month to once every 6 months.

Two of the Division's staff assisted in coordinating and providing environmental program services in the West Memphis tornado disaster.

The Division completed the 1987 contract with the United States Consumer Product Safety Commission in September. This year's contract included 10 in-depth investigations involving product related injuries, 20 fire-works surveillance inspections, 30 recall effectiveness checks which involved products recalled, and 2 statewide networking programs that allowed for better recognition of the work accomplished by the Consumer Products Safety Commission.

Bureau of Public Health Programs

Nancy Kirsch, Acting Director

OFFICE OF PRIMARY CARE

The Office of Primary Care was established by the Arkansas Department of Health in July, 1987. Two-thirds of the anticipated staff has been hired and oriented.

The Office has submitted 34 Arkansas counties for review for designation as Health Manpower Shortage Areas (HMSA). Three service areas have completed the review cycle and received HMSA designations. The staff will continue to analyze geographic areas of the state to identify areas that should be designated as shortage areas. Priorities will be set for the development of future primary care sites as a result of this analysis.

The Office of Primary Care, the Arkansas State Medical Licensure Board, and the University of Arkansas for Medical Sciences' AHEC Program have agreed to conduct a physicians survey as part of the annual licensure renewal process. The physician manpower database will provide the numbers, specialties, degree of activity and location of physicians in Arkansas.

DIVISION OF HEALTH STATISTICS AND EPIDEMIOLOGY

Good Beginnings Evaluation

The Division began work on an evaluation of the Good Beginnings Project. The Project is an outgrowth of the federal SOBRA legislation using Indigent Health Trust Fund dollars as match to expand and enhance Medicaid services for pregnant women and infants. The evaluation involves linking Medicaid records with birth certificate files to assess the impact on reproductive outcomes. The development of this data linkage will be of great value in many other policy and programmatic endeavors as well.

Heptachlor

With funds awarded in September, 1986, by the Environmental Protection Agency (EPA) for studies of breast-feeding mothers and their children, Dr. Don Matison of UAMS, two full-time project staff, and officials of ADH held a workshop on the experiences from the 1986 heptachlor contamination of dairy products.

A database of 950 women who donated breast milk samples (in response to the Governor's offer to test breast milk in April, 1986) was completed. All lab results were returned and data analysis is in progress. Initial findings indicate very low concentrations of a heptachlor metabolite in most mothers' milk and somewhat elevated levels in a very small number.

Environmental Exposures

Epidemiologists from the Division worked with the Centers for Disease Control (CDC) on the assessment of

phenol and herbicide exposure in Jacksonville. This study was the first in Arkansas to attempt to assess community exposure to phenols and herbicides. The study showed no significant impact on the population.

In response to public concerns about possible environmental contamination with PCBs, ADH designed a study to detect PCBs in serum of El Dorado residents. The levels found in the El Dorado study group do not represent higher levels than would be expected as background levels in the general population. Data were examined by race, occupation, education, community of residence, income, fish consumption and age. All of these factors, except age, proved to be of no statistical significance. There were statistically significant higher PCB levels in participants over 50 years old.

Administration

In an effort to establish a more effective organizational structure, the Division of Health Statistics and Epidemiology was transferred to the Bureau of Administrative Support Services. Epidemiological functions previously in the Division were transferred to the Division of Health Maintenance in the Bureau of Public Health Programs. Similar to the National Center for Health Statistics and comparable organizations in other states, the Division of Health Statistics and Epidemiology has changed its name to the Arkansas Center for Health Statistics.

SECTION OF MATERNAL AND CHILD HEALTH

WIC Program

With a \$2 million increase in funding for 1987, the WIC Program was able to serve the largest caseload since its beginning in Arkansas in 1974. During 1987, the WIC Program's average monthly caseload was 37,286 participants.

Also in 1987, legislation was enacted by the Arkansas General Assembly to exempt WIC food purchases from the State Sales Tax. This measure will enable the WIC Program to utilize the \$700,000 in tax savings to serve approximately 1,500 additional participants each month.

Arkansas has now been able to make significant impact into the reservoir of need for WIC supplemental food. The percentage of potential eligibles being served by the Arkansas WIC Program has risen from about 29% two years ago to approximately 32% at present.

Hearing, Speech and Vision Services

During FY 86-87, the clinics in Little Rock and Forest City provided 1,695 speech, language and audiology evaluations. There were 1,992 units (1/2 hour) of therapy services provided. The total number of children seen for diagnostic services was 1,036.

The Infant Hearing Program, designed to provide a means of identifying hearing loss in newborns, operates in eight counties of western, central and eastern Arkansas. Of the 9,211 births reporting in this area in 1987, 811 were considered at risk for a hearing loss. Auditory

brainstem response screenings were conducted on 658 high risk infants. Ten infants were identified as positive for a hearing loss. The personnel in this program work closely with the primary health care provider in assisting with quality follow-up care.

The Vision and Hearing Screening Program participated in the screening of 54,401 children for hearing and 57,465 for vision problems. Four thousand four hundred and seventy-seven children were referred for follow-up services with local health care providers.

Family Planning Program

Family Planning clinics were conducted in all 75 counties during 1987. A total of 49,277 women received family planning services at 96 Health Department and 9 contractual clinic sites. Regional vasectomy clinics provided 277 vasectomies.

Through a contract with Arkansas Family Planning Council, sexuality education presentations were made to an estimated 60,000 adolescents in public schools.

The annual Women's Health Care Update conference was attended by 203 Health Department and Arkansas Family Planning Council personnel. The conference was offered to the clinical staff which included physicians, nurses, social workers and nutritionists.

Maternity

The Maternity Program provided services to patients in 58 counties through 73 clinic sites. During FY87 the maternity patient caseload increased 15% throughout the state. At the same time, there was a 37% increase in the number of prenatal visits and patient encounters.

Healthy Beginnings/Good Beginnings

The Healthy Beginnings Program provided prenatal education classes for approximately 2,350 maternity patients. More than 18,283 persons attended sex education and related health education classes by Healthy Beginnings in a nine county area of East Arkansas.

The Sixth Omnibus Budget Reconciliation Act of 1986, known as SOBRA, introduced two important changes to indigent health care. SOBRA mandates Medicaid coverage for all income-eligible pregnant women and infants, with children's coverage expanded by an additional year every October 1 up to age 5 in 1990. COBRA, passed in 1985, included a waiver of comparability that allows expanded services for pregnant women not provided to other Medicaid service groups.

With the Healthy Beginnings project as a model and increased Medicaid coverage, the Good Beginnings Program was initiated April 1, 1987. The Arkansas Indigent Health Care Advisory Council approved the use of Indigent Health Trust Fund dollars as state match for Medicaid. The Good Beginnings Program extends Medicaid coverage for pregnant women and infants up to 75% of the federal poverty level, compared to the state's Medicaid coverage at 26%. Approximately 60% more pregnant women are eligible for Medicaid through this expansion. Public and private providers are reimbursed for

comprehensive prenatal care, delivery, and infant care. In February, 1988, coverage will be extended to women and children with family incomes up to 100% of the poverty level.

Another provision of the SOBRA legislation allowed qualified providers to determine "presumptive eligibility" of pregnant women for Medicaid benefits. Using income guidelines and eligibility criteria provided by Arkansas Department of Human Services, local health units determine a pregnant woman's "presumptive eligibility" for benefits. Since the patient's benefits begin immediately, "presumptive eligibility" has enabled more pregnant women to get prenatal services earlier in their pregnancy. From April through November 1987, 3,771 pregnant women were found to be "presumptively eligible" for Medicaid benefits.

Lay Midwife Licensure

The Arkansas Department of Health is the agency responsible for the promulgation of the Rules and Regulations governing the practice of lay midwifery pursuant to Act 481 of 1987. The Maternity Program develops the examination and related education materials, administrators and grades of the examination, verification of additional licensing requirements, and issues permits. The Program also assists the Board of Health in making needed revisions to the Rules and Regulations as prescribed by the Administrative Procedures Act. There are 14 licensed lay midwives at this time.

Child Health

SIDS Program

The Sudden Infant Death Syndrome Program received reports of 76 presumed SIDS deaths during 1987. The program provided transportation and autopsies for 48 of these babies. Thirty-four cases were confirmed by autopsy and counseling was provided for parents who desired it.

Screening

New Rules and Regulations for Testing of Newborn Infants for Phenylketonuria and Congenital Hypothyroidism became effective June 17, 1987.

Rules and Regulations for Sick Cell Anemia testing and Scoliosis Screening are being developed as mandated by law.

Safety Seats

In July, 1987, an additional 400 infant/toddler safety seats were added to the Program's inventory, bringing the total number of seats acquired since the Program began in 1983 to 4,900. Approximately 3,300 of these seats are in use at any one time during the year.

Well Child Clinics

During 1987, 309 clinics were held each month for well babies. These clinics were at 97 different sites across the state. Services were provided for over 36,000 children by private physicians, resident physicians from UAMS and Certified Pediatric Nurse Practitioners.

EPSDT

The Early and Periodic Screening, Diagnosis, and Treatment Program provided approximately 3,782 screens during 1987. An average of 41% of the children screened were referred for medical follow-up.

Section of Environmental and Health Maintenance

DIVISION OF IN-HOME SERVICES

Home Health

The Home Health Program served 5,271 patients during the last fiscal year. The following chart gives visit statistics for this period.

Discipline	# of visits	% of total
Nursing	66,345	58.0%
Physical Therapy	11,837	10.3%
Speech Therapy	1,552	1.4%
Occupational Therapy	15	0.0%
Home Health Aide	34,618	30.3%

In addition to the above services the agency also provided 797 out-patient physical therapy visits and 31 out-patient speech therapy visits.

Home Care

The Home Care Program began as a pilot program in Area IX and Area XI in April, 1986 and was expanded as a statewide services program in November, 1986. This program offers nursing and aide in-home services for patients who do not meet Home Health criteria. The caseload has continued to grow at a steady pace in 1987.

Caseload Statistics

January 1, 1987	432 patients
December 15, 1987	711 patients

Hospice

In the Spring of 1987 a study was done on the percentage of cancer patients in the Home Health caseload. From this, the In-Home Services Division requested permission to do a pilot for a Medicare-certified Hospice. Approval was given for a 12-month pilot in a limited number of counties in Eastern Arkansas.

The Hospice Program assists the patient in accepting death and provides physical and emotional support for both the patient and the family. Trained volunteers are used extensively in the Program.

Personal Care

In 1981, the White River Area Agency on Aging transferred its personal care caseload in 10 northern

counties to the Health Department. In July, 1986, the Arkansas Department of Human Services changed its policies to allow any Medicare-Certified Home Health provider to enroll as a Personal Care Provider. The Arkansas Department of Health made the decision to expand the Program statewide, utilizing a sliding fee pay scale. In January, 1987, ADH began implementing personal care services statewide.

Personal Care services are now available in every area except Area VIII.

Caseload Statistics

April 1, 1987	438 patients
December 15, 1987	1,216 patients

Office of Emergency Medical Services

During 1987, the Office of EMS inspected and licensed 190 ambulance services (2 new ones), registered 367 vehicles, and investigated 17 complaints. The Office administered 1,125 certification exams. There were 756 people certified at the basic level, 22 EMT-Intermediates, and 31 paramedics. Twelve new training sties (7 basic, 3 EMT-Intermediate, and 2 paramedic) were approved.

Through a contract form the Highway Safety Office, EMS plans to purchase a disc drive for collection/storage of EMS data. The EMS database will be linked with that of Highway Safety for a study to determine the impact of emergency medical services on victims of motor vehicle accidents.

The Office also assisted Arkansas Childrens Hospital in obtaining a grant to study the effect of emergency medical services on pediatric emergencies. The Office is working with Arkansas Childrens Hospital to develop EMS training programs dealing with pediatric patients.

In another project, the Office is working with the Spinal Cord Commission in its public education efforts by reviewing emergency treatment materials and helping with prevention/treatment program presented to senior high school students.

Blood Alcohol Program

Since 1970, there have been several different models of breathtesting devised approved for use in Arkansas. This situation became increasingly unmanageable as the numbers and the cost of the devices increased. Also, as new models were introduced, concern grew over the continued use of the older models. As a result, legislation was passed in 1985 which was designed to eliminate the older models and standardize the equipment used statewide.

Arkansas now has a three-year state contract with one of the breathtesting instrument manufacturers to sell directly to law enforcement agencies a unit specified by the Arkansas Department of Health.

Arkansas expects to gain the following benefits from this new system: 1) reduction in law enforcement man-hours required for each DWI case; 2) reduction in initial cost of equipment; 3) remote, on-site data entry; 4) reduction in need for training of officers; and 5) remote equipment monitoring capability.

Because of the many benefits to law enforcement, voluntary change to the new instrument within the three-year contract period is anticipated.

Division of Health Maintenance

Tuberculosis Program

The Tuberculosis Program contracted with 16 hospitals for the care and treatment of 202 TB patients last year. Mobile x-ray technicians held an average of 18 x-ray clinics a month in the local health units and one each month in nursing homes where an outbreak of tuberculosis was suspected. Seventeen county health units have x-ray equipment and conducted their own clinics. An average of 45 chest clinics were held monthly throughout the state.

Program personnel pursued a more active role in searching for TB among nursing home residents and personnel. Several small epidemics were identified which required using preventive therapy with isoniazide to stop the infection before it developed into additional cases of tuberculosis.

AIDS/STD Program

A variety of activities directed toward reducing the transmission of sexually transmitted pathogens occurred during the last year. The challenge of increasing activity in responding to the AIDS problem, while maintaining control efforts directed toward traditional sexually transmitted diseases, increased the activity of program staff dramatically.

Sexually Transmitted Disease Program

A study of prevalence for chlamydia infection among women seen in STD and Family Planning clinics was completed during the year. Positivity rates were found to be 20% and 30% for women in Family Planning and STD clinics, respectively.

A new facility was secured for the Little Rock STD clinic. Staff training and cooperative agreements with the University of Arkansas for Medical Sciences have been developed to utilize this clinic as a statewide training resource. Training will be targeted for medical students, nurses, and disease intervention specialists.

During the calendar year, all epidemiologic activity and morbidity forms were converted to an IBM-PC computer system. This was then made compatible with the state data management system (WANG) to allow greater data entry capabilities.

AIDS Prevention Program

A total of 50 AIDS cases were reported during the year. The cumulative number of reported cases now to-

tals 90. Steps have been initiated by the Board of Health to mandate HIV antibody positive reporting, conduct seroprevalence surveys, and increase voluntary antibody testing.

All disease intervention staff, as well as 150 other agency staff, received HIV counselor training. HIV counseling and testing is now available in 13 sites compared to one at the beginning of the calendar year. Patient requests for services have increased by 900%.

The toll-free AIDS Hotline and Speakers Bureau became increasingly active during the calendar year. Contracts to provide education to specific target populations were developed with three organizations. Approximately 350 programs were presented to over 30,000 people.

An Advisory Committee composed of representatives of state agencies and health care professional associations was convened during the year. This committee has recommended agency direction and developed rules and regulations for Board of Health review. The committee will continue to function in an advisory capacity to the Board of Health on AIDS issues.

Epidemiology Program

The Epidemiology Office was involved in investigation and control of an outbreak of hepatitis in Washington County. More than 60 cases of hepatitis were discovered in this area in 1987, compared to 5 cases in 1986. The cases appear to be transmitted from person to person, with no large number of cases associated with a single event.

Regular lectures are now being provided at the Arkansas Law Enforcement Training Academy on diseases of public health concern, especially those to which police or fire department personnel are likely to be exposed. The State Criminal Justice Association and EMT Association meetings were addressed on similar topics.

Environmental Exposures

Chlordane and PCB test results of fish from the Arkansas and Mississippi Rivers have shown the fish to be within FDA tolerance for these chemicals and therefore fit for human consumption. Samples were taken at six separate locations along the Mississippi River and from five separate locations along the Arkansas River. Samples were collected by the Game and Fish Commission and tested in FDA laboratories.

Samples of El Dorado area fish were also collected by the Arkansas Game and Fish Commission and analyzed by FDA. Fish were sampled from six different sites and measured for PCB and other pesticides. All samples tested were below FDA action levels. Additional fish samples in the El Dorado area were collected in October.

All of the dairy farms quarantined because their milk contained over 0.1 PPM of heptachlor are now in compliance. The U. S. Department of Agriculture still has 22 cattle, sheep or swine producers on their heptachlor suspect list. These animals can be released to slaughter

when laboratory tests show the heptachlor level in tissue samples to be below 0.3 PPM.

An environmental epidemiologist was hired by the Arkansas Department of Health to carry out investigations in El Dorado. A project plan was designed by officials of the Arkansas Department of Health, the Centers for Disease Control and the Agency for Toxic Substance and Disease Registry. The plan specifically addressed the major issues of concern raised by the citizens of El Dorado.

As a result of a request by the Arkansas Department of Health in early December of last year, the National Institute for Occupational Safety and Health (NIOSH) is evaluating worker exposure to PCBs at the ENSCO facility in El Dorado. The NIOSH team began their investigation January 27, 1987. According to John K. Bainbridge, Chief of the Hazard Evaluations and Technical Assistance Branch of NIOSH in Cincinnati, Ohio, the final report will address: 1) review of existing environmental and medical records; 2) environmental assessment, including air, surface, and bulk material sampling; and 3) blood PCB testing and other appropriate medical evaluation of workers. Laboratory analyses on this portion of the project have been completed and the NIOSH investigators are writing the final report.

Immunization Program

Hospital-based Maternal Education Program

The hospital-based Maternal Education Program continued in all 74 hospitals and clinics in Arkansas that have maternity facilities. Approximately 29,000 new mothers were contacted in 1987 by auxiliary members, nursing staff or other hospital personnel. The importance of beginning the immunization series early was stressed in individualized sessions with the parents.

The Maternal Education Program also provided audiovisuals for 57 hospitals to use on their educational channels, in prenatal or prepared childbirth classes, and in discharge classes.

There are currently 50 hospitals participating in follow-up programs of the Maternal Education Program where phone calls and/or post card mailings encourage parents to have their infants immunized on schedule. To evaluate the follow-up program, a cohort study of maternal response to follow-up was conducted in three regions of the state. A significant difference was found between hospitals with follow-up and those without follow-up. The study group (follow-up) showed that 88% had started their immunizations and the control group (no follow-up) showed that only 60% had started their immunizations. As a result of the positive results of the retrospective study, the Arkansas Hospital Auxiliary Association Board of Directors voted to give full support to conducting follow-up in each of their regions.

School and Day Care Surveys

The 1986/1987 School and Day Care Facility Survey provided the following results:

Kindergarten-First Grade	
Vaccine Category	% Immunized
Polio (3+doses)*	94
DTP/Td/DT (3+ doses)*	94
Measles	98
Rubella	98
Mumps	97
Combinations	
P(3+), DTP (3+), M,R	93
P(3+), DTP (3+), M,R. MPS	Unknown

*At least one dose after fourth birthday.

Preschool Children		
Vaccine Category	Day Care % Immunized	Head Start* % Immunized
Polio (3+doses)	90	96
DTP/Td/DT (3+ doses)	92	97
Measles	88	97
Rubella	87	97
Mumps	88	98
Combinations		
P(3+), DTP (3+), M,R	84	95
P(3+), DTP (3+), M,R. MPS	Unknown	

*It should be noted that the Head Start survey counts only those children over 19 months of age, while the day care survey includes Infant and Toddler programs (children younger than 19 months of age).

Adolescents and Young Adults

Senate Bill 320, requiring full-time students in public and private colleges and universities in the state of Arkansas to furnish proof that they have immunity against measles and rubella, passed both houses and was signed by the Governor on March 9, 1987. Beginning in the Fall of 1987, college and university students provided evidence of immunity to measles and rubella diseases in order to attend classes.

Rape Crisis Program

The Rape Crisis Program contracted with various agencies in 1987 to promote services to rape victims and to train service providers, such as:

- The Association for Retarded Citizens. Arkansas trained a network of parents, professionals and clients about prevention, intervention, and legal issues; provided information and workshops for local and regional training; and developed a public awareness campaign.
- The American Civil Liberties Union. Arkansas developed a pamphlet concerning the legal rights of a rape victim.
- Advocates for Battered Women developed a manual and video on how to deal with the issue of marital rape and conducted 12 training sessions on the subject.
- The Arkansas Law Enforcement Training Academy provided law enforcement officers training regarding

rape-child sexual assault investigation and sensitivity to the victims of sexual assault crimes.

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DIVISION OF DATA PROCESSING

The physical size of internal memory and disk storage capacity of the ADH computer system were upgraded. This improved our sharer problems and allowed the system to communicate to remote site users. Personal computers (PCs) can now be tied into our system over telephone lines. This allowed Community Health Services to begin to incorporate PCs into our local health units.

All new fees passed by the legislature have been added to our in-house automated Accounts/Receivable system. Some other major completed projects include: the ADH Management System, Immunization and Laboratory Fees, Upgrade of VD Program, Personnel, and the creation of IRS 1099 Forms.

In addition to these larger projects, the division completed over 50 requests for services and the Training Instructor held 64 classes for agency users.

DIVISION OF FINANCIAL MANAGEMENT

The Division of Financial Management's 1987 activities included the following:

- The agency received an excellent audit report from the State Legislative Audit Division for the year ended June 30, 1987.
- As a result of time allocation sampling, the agency was able to draw an additional \$395,000 in federal funds that would otherwise have been turned back.
- The purchasing section processed 2,838 purchase orders for goods and services and the accounts payable section processed 52,440 vouchers for payment to vendors and travelers.

DIVISION OF PERSONNEL

The Personnel Division completed the development of a new selection system. The old system was based upon using questions on the knowledge, skill, and abilities required by job descriptions. For some jobs, these were outdated, lacking, or totally non-existent. This made question development and selection a difficult process. Recently, the agency started using job functions from the performance evaluation system to develop questions used in the selection process. This approach is more practical because job functions can be updated or changed easily. With this improved tool for question development, supervisors are able to more clearly identify factors to be considered in the selection process.

The major pieces of the Personnel Computerization project are now in place. The automation of payroll, applicant tracking, EEO statistics, and Reduction-In-Force processing are now complete. We still need to develop various report procedures for both personnel and the bureaus.

Finally, we are developing stronger communications with both the Payroll Section of the Accounting Division and the budget/personnel coordinators in an effort to prevent administrative problems which occur in the course of everyday business.

DIVISION OF VITAL RECORDS

The Division of Vital Records' activities for 1987 were highlighted by development of regulations and birth certificates for foreign-born children adopted by U.S. citizens according to Act 219 of 1987. Other activities included preservation of old certificates by microfilming birth documents for the years 1922, and 1936 through 1939. Each birth certificate filed is not being edited through an automated process. This process eliminates many manual hours. Our compliance program has resulted in seventy percent of all birth events being filed within ten days after the event occurred. The no-record letter sent to clients when no certificate is on file is now automated.

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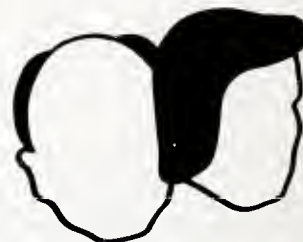
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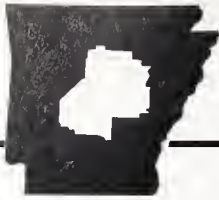
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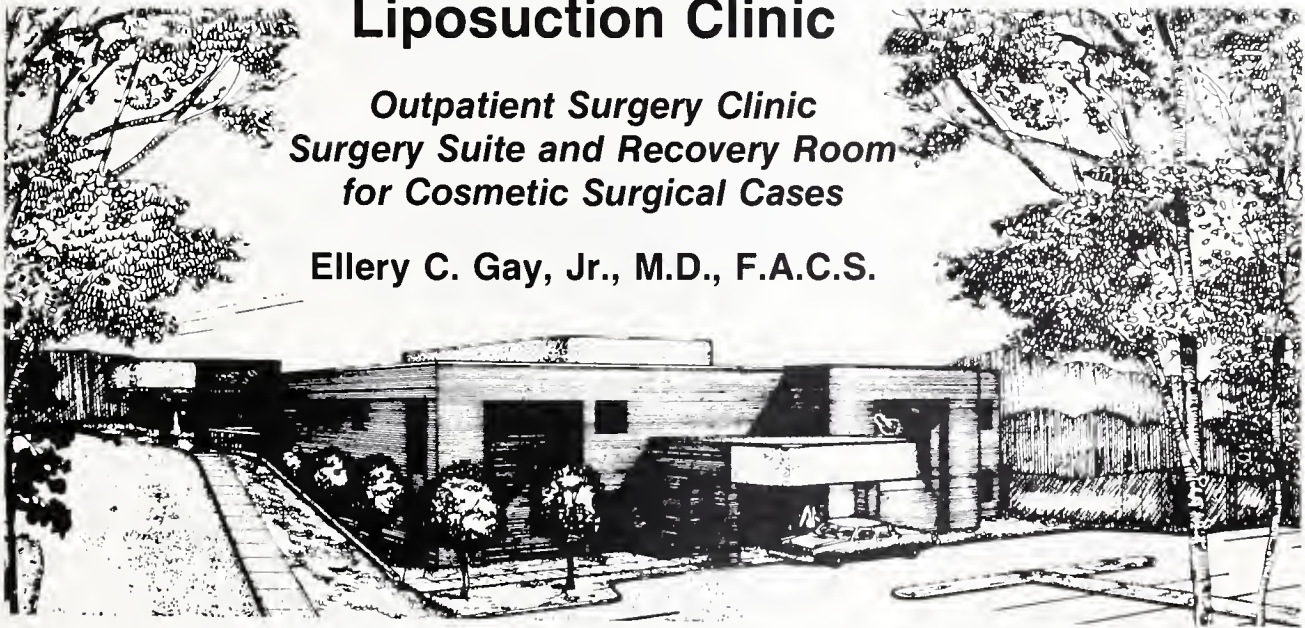
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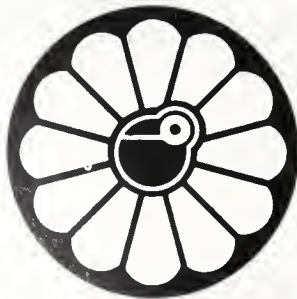
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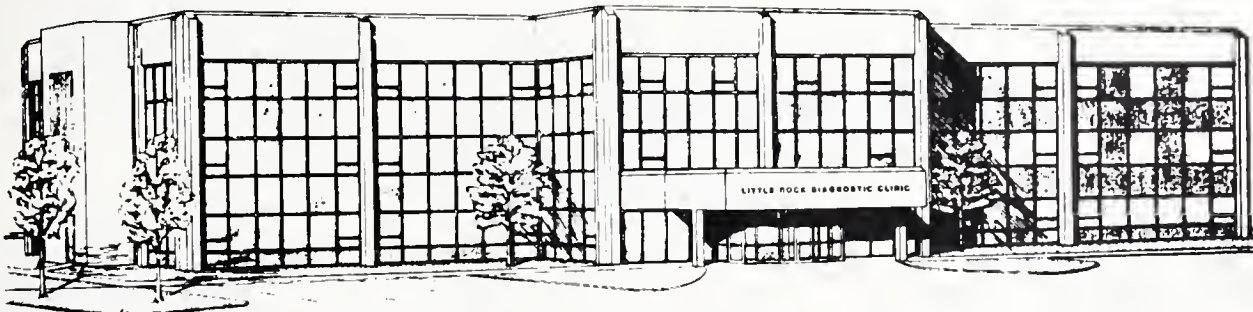
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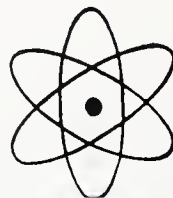
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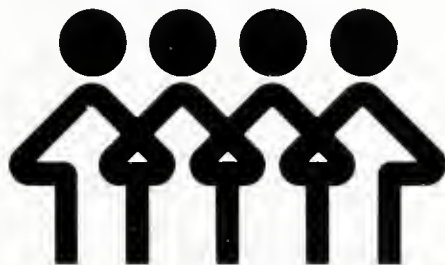
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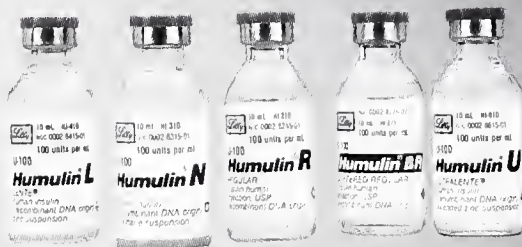
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Healthy Mothers, Healthy Babies

*Katherine L. Doyle, M.D.**

I still remember being totally amazed when as a child I found that with a magnifying glass and a sunny summer day, I could take a bit of energy from each of the sun's rays, focus it, and set a piece of paper on fire. I didn't understand the mechanism, but I clearly understood the power of what I later learned was a coalition.

Healthy Mothers Healthy Babies Coalition is the magnifying glass that takes a little energy from some forty member organizations, focuses that energy into education and advocacy, and, hopefully, fires the public into action around issues of maternal and child health.

In 1986 with a great deal of assistance from the local chapter of the March of Dimes and the Arkansas Perinatal Association, Arkansas became one of 53 states or territories with a HMHB Coalition. Today some forty member groups share the HMHB logo and take part in various activities undertaken by the coalition. These organizations, which come from both the public and private sector, each have a unique mission, but share the knowledge that some part of the mission deals with maternal and child health issues. It is the common ground that HMHB unifies and magnifies.

Every year the coalition chooses a theme around which it plans projects for the year. Last year was designated "BABY" (Better Arkansas Baby Year) and the focus was on promoting prenatal care that occurred early and often. To create awareness among legislators of the issues around maternal and infant health, HMHB helped sponsor Motherhood and Apple Pie Day during the legislative session. Each senator and representative received a small apple pie and a packet of educational materials which included maternal and infant health statistics for all areas of Arkansas.

"Having a Baby - See a Doctor Early and Often" flyers, containing information on how to obtain such care, were distributed around the state through member organizations in an effort to educate the public.

What was billed as "The World's Largest Baby Shower" occurred in Little Rock when the Arkansas Lung Association and HMHB assembled over 200 pregnant

women and their friends for a Saturday morning of education, entertainment, and baby gifts. When the Infant Mortality Conference sponsored by Governor Clinton and the Southern Legislative Coalition was held, HMHB arranged to have member organizations provide exhibits for the meeting.

With all of this activity occurring in the first year and a half, it is not surprising that Lori Cooper, president of the National Coalition of Healthy Mothers Healthy Babies and a guest at the annual meeting of HMHB, expressed both amazement and pleasure at the accomplishments of the Arkansas chapter. At this same meeting three guest speakers, Dr. Joycelyn Elders, Dr. Lee Lee Doyle, and Anita Gottlieb addressed the project for 1988, "Teen Pregnancy, Reducing the Risk." This theme seemed most appropriate to HMHB as it could focus on either reducing the risk of teens getting pregnant or reducing the risk of problems to teens already pregnant. In keeping with the 1988 goal, HMHB has already helped the Arkansas Family Planning Council, Inc., sponsor a lecture by Ron Johnson, an administrator of a program for teen fathers in California. At the workshop HMHB once again arranged for member organizations to have exhibits and assisted in publicizing the event.

During 1988 the coalition plans to seek expert advice on how to reduce the risk of teen pregnancy by sponsoring a state-wide contest. Through essays, posters, or public service announcements, teens will be asked to "show and tell" in an effort to educate us as to what they think should be done to reduce the risk of teen pregnancy. Well-known experts will choose the prize-winning entries, which will be publicized as widely as possible. Winners will be honored at the annual meeting in the fall. Other projects being discussed include preparation of a state-wide directory of services available to teens and sponsorship of a speakers bureau. Each of these projects will be co-sponsored by HMHB and one or more of the member organizations.

Healthy Mothers, Healthy Babies Coalition serves to bring members of the private, public, and professional community together around an issue of common interest and by so doing allow each to assist the other in making every year the Better Arkansas Baby Year.

* Dr. Doyle is a professor of Obstetrics and Gynecology at UAMS and has an interdisciplinary doctorate in reproductive physiology from Tulane.

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INDICATIONS AND USAGE: BECAUSE OF REPORTS OF INTESTINAL AND GASTRIC ULCERATION AND BLEEDING WITH SLOW-RELEASE POTASSIUM CHLORIDE PREPARATIONS, THESE DRUGS SHOULD BE RESERVED FOR THOSE PATIENTS WHO CANNOT TOLERATE OR REFUSE TO TAKE LIQUID OR EFFERVESCENT POTASSIUM PREPARATIONS OR FOR PATIENTS IN WHOM THERE IS A PROBLEM OF COMPLIANCE WITH THESE PREPARATIONS.

1. For therapeutic use in patients with hypokalemia with or without metabolic alkalosis, in digitalis intoxication and in patients with hypokalemic familial periodic paralysis.
2. For the prevention of potassium depletion when the dietary intake is inadequate in the following conditions: Patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis with ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, and with certain diarrheal states.
3. The use of potassium salts in patients receiving diuretics for uncomplicated essential hypertension is often unnecessary when such patients have a normal dietary pattern. Serum potassium should be checked periodically, however, and if hypokalemia occurs, dietary supplementation with potassium-containing foods may be adequate to control milder cases. In more severe cases supplementation with potassium salts may be indicated.

CONTRAINDICATIONS: Potassium supplements are contraindicated in patients with hyperkalemia since a further increase in serum potassium concentration in such patients can produce cardiac arrest. Hyperkalemia may complicate any of the following conditions: Chronic renal failure, systemic acidosis such as diabetic acidosis, acute dehydration, extensive tissue breakdown as in severe burns, adrenal insufficiency, or the administration of a potassium-sparing diuretic (e.g., spironolactone, triamterene).

Wax-matrix potassium chloride preparations have produced esophageal ulceration in certain cardiac patients with esophageal compression due to enlarged left atrium.

All solid dosage forms of potassium chloride supplements are contraindicated in any patient in whom there is cause for arrest or delay in tablet passage through the gastrointestinal tract. In these instances, potassium supplementation should be with a liquid preparation.

WARNINGS: Hyperkalemia—In patients with impaired mechanisms for excreting potassium, the administration of potassium salts can produce hyperkalemia and cardiac arrest. This occurs most commonly in patients given potassium by the intravenous route but may also occur in patients given potassium orally. Potentially fatal hyperkalemia can develop rapidly and be asymptomatic. The use of potassium salts in patients with chronic renal disease, or any other condition which impairs potassium excretion, requires particularly careful monitoring of the serum potassium concentration and appropriate dosage adjustment.

Interaction with Potassium-Sparing Diuretics—Hypokalemia should not be treated by the concomitant administration of potassium salts and a potassium-sparing diuretic (e.g., spironolactone or triamterene) since the simultaneous administration of these agents can produce severe hyperkalemia.

Gastrointestinal Lesions—Potassium chloride tablets have produced stenotic and/or ulcerative lesions of the small bowel and deaths. These lesions are caused by a high localized concentration of potassium ion in the region of a rapidly dissolving tablet, which injures the bowel wall and thereby produces obstruction, hemorrhage or perforation.

K-DUR tablets contain micro-crystalloids which disperse upon disintegration of the tablet. These micro-crystalloids are formulated to provide a controlled release of potassium chloride. The dispersibility of the micro-crystalloids and the controlled release of ions from them are intended to minimize the possibility of a high local concentration near the gastrointestinal mucosa and the ability of the KCl to cause stenosis or ulceration. Other means of accomplishing this (e.g., incorporation of potassium chloride into a wax matrix) have reduced the frequency of such lesions to less than one per 100,000 patient years (compared to 40–50 per 100,000 patient years with enteric-coated potassium chloride) but have not eliminated them. The frequency of GI lesions with K-DUR tablets is, at present, unknown. K-DUR tablets should be discontinued immediately and the possibility of bowel obstruction or perforation considered if severe vomiting, abdominal pain, distention, or gastrointestinal bleeding occurs.

Metabolic Acidosis—Hypokalemia in patients with metabolic acidosis should be treated with an alkalinizing potassium salt such as potassium bicarbonate, potassium citrate, potassium acetate, or potassium gluconate.

PRECAUTIONS: The diagnosis of potassium depletion is ordinarily made by demonstrating hypokalemia in a patient with a clinical history suggesting some cause for potassium depletion. In interpreting the serum potassium level, the physician should bear in mind that acute alkalosis per se can produce hypokalemia in the absence of a deficit in total body potassium while acute acidosis per se can increase the serum potassium concentration into the normal range even in the presence of a reduced total body potassium. The treatment of potassium depletion, particularly in the presence of cardiac disease, renal disease, or acidosis requires careful attention to acid-base balance and appropriate monitoring of serum electrolytes, the electrocardiogram, and the clinical status of the patient.

Laboratory Tests: Serum potassium determinations are recommended. In addition, during the treatment of potassium depletion, careful attention should be paid to acid-base balance, other serum electrolyte levels, the electrocardiogram, and the clinical status of the patient, particularly in the presence of cardiac disease, renal disease, or acidosis.

Drug Interactions: Potassium-sparing diuretics; see **WARNINGS**.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term carcinogenicity studies in animals have not been performed.

Pregnancy Category C: Animal reproduction studies have not been conducted with K-DUR. It is also not known whether K-DUR can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. K-DUR should be given to a pregnant woman only if clearly needed.

Nursing Mothers: The normal potassium ion content of human milk is about 13 mEq per liter. Since oral potassium becomes part of the body potassium pool, so long as body potassium is not excessive, the contribution of potassium chloride supplementation should have little or no effect on the level in human milk.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS: One of the most severe adverse effects is hyperkalemia (see **CONTRAINDICATIONS**, **WARNINGS**, and **OVERDOSAGE**). There have also been reports of upper and lower gastrointestinal conditions including obstruction, bleeding, ulceration, and perforation (see **CONTRAINDICATIONS** and **WARNINGS**); other factors known to be associated with such conditions were present in many of these patients.

The most common adverse reactions to oral potassium salts are nausea, vomiting, abdominal discomfort, and diarrhea. These symptoms are due to irritation of the gastrointestinal tract and are best managed by taking the dose with meals or reducing the dose.

Skin rash has been reported rarely.

OVERDOSAGE: The administration of oral potassium salts to persons with normal excretory mechanisms for potassium rarely causes serious hyperkalemia. However, if excretory mechanisms are impaired or if potassium is administered too rapidly intravenously, potentially fatal hyperkalemia can result (see **CONTRAINDICATIONS** and **WARNINGS**). It is important to recognize that hyperkalemia is usually asymptomatic and may be manifested only by an increased serum potassium concentration and characteristic electrocardiographic changes (peaking of T-waves, loss of P-waves, depression of S-T segment, and prolongation of the QT-interval). Late manifestations include muscle-paralysis and cardiovascular collapse from cardiac arrest.

Treatment measures for hyperkalemia include the following:

1. Elimination of foods and medications containing potassium and of potassium-sparing diuretics.
 2. Intravenous administration of 300 to 500 ml/hr of 10% dextrose solution containing 10–20 units of insulin per 1,000 ml.
 3. Correction of acidosis, if present, with intravenous sodium bicarbonate.
 4. Use of exchange resins, hemodialysis, or peritoneal dialysis.
- In treating hyperkalemia, it should be recalled that in patients who have been stabilized on digitalis, too rapid a lowering of the serum potassium concentration can produce digitalis toxicity.

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HIV-Related Malignancy

Joseph Beck, M.D., Carlos A. Araoz, M.D., and Robert C. Landgren, M.D.*

A discussion of the similarities and the differences between Kaposi's sarcoma (KS) and epidemic Kaposi's sarcoma (EKS), which affect mostly homosexual men with acquired immune deficiency system (AIDS), is presented, followed by a review of the therapeutic options available for both KS and EKS and a brief review of other secondary malignancies which affect AIDS patients. Continued investigation in the treatment of EKS and other HIV-related neoplasms is needed to provide the optimum control of these diseases.

Introduction

Kaposi's sarcoma was a relatively rare tumor in the United States until 1981. It had previously been recognized as a slow-growing tumor affecting the lower extremities of older men of Jewish and Mediterranean extraction. In the early 1980's, epidemic Kaposi's sarcoma (EKS) was seen as a rapidly-growing tumor affecting numerous sites in homosexual men with AIDS, which was caused by infection with the human immunodeficiency virus (HIV).

Various reports documented no histologic differences between the various types of KS. The stages, which are macular, papular and nodular, have differences. The macular stage is characterized by the presence of blood vessels separated by spindle-shaped cells and extravasated erythrocytes. The papular lesions have those features supplemented by lymphocytic and siderophages infiltrate of the dermis. The nodular lesions have those features listed and additionally include bundles of spindle cells and collagen fibers.

Treatment for classic KS involves local radiation therapy and, in advanced cases, gentle chemotherapy. Treatment for EKS has included radiation therapy, chemotherapy, and interferon therapy - all with varying degrees of success. Treatment for EKS has not resulted in long-term survival and, in most cases, is only palliative.

Epidemiology and Etiology of EKS

Kaposi's sarcoma (KS) was first described in 1872 by Moritz Kaposi, a Hungarian dermatologist, as "idiopathic, multiple pigmented sarcomas of the skin." Since then four types of KS have been recognized. First, this classic type was seen as a relatively rare neoplasm found more frequently among Mediterranean or eastern European Jewish men aged fifty to eighty.¹ A second type of KS was first noticed in Africa in 1914, but it took two decades before the endemic nature of the disease was noted. This African variety affects black men aged twenty-five to forty and seems to be related to immune status. Many patients, but not all, are HIV-negative. A third form of KS, also related to immune status, appears in renal transplant patients on large doses of immunosuppressant drugs. In nearly all cases, cessation of these drugs allows the patients' immune systems to recover and the KS involutes.

Epidemic Kaposi's sarcoma (EKS), a fourth form, shows more predilection for occurring in HIV-positive gay men than in others at risk for AIDS. Forty to fifty percent of the male homosexuals will develop EKS during the course of their HIV infection, but EKS will affect only eight to twelve percent of the heterosexual males.² This is most likely due to co-infection with cytomegalovirus (CMV).

Both KS and EKS are reported to be either of vascular or primitive mesenchymal cell origin. Both viral and genetic factors are involved, and a relationship to CMV infection, widely present among homosexuals who are promiscuous, appears to be closely associated to both KS and EKS.

Clinical Features

Kaposi's sarcoma is multifocal in origin with multiple reddish-purple nodular lesions, which may result in extensive ulcerating plaques. It is an indolent disease when found in older men. The lesions are generally confined to lower extremities, accompanied by venous stasis and lymphedema. Untreated classic KS has a ten- to fifteen-year survival rate, and controlled studies with chemotherapy have not demonstrated improved survival.¹

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In addition to cutaneous lesions, disseminated mucocutaneous lesions can be seen in EKS. It often involves lymph nodes and visceral organs, especially the gastrointestinal tract and lungs. Other sites affected include sites of sexual trauma, ear, penis, eyelid, nose, perianal and oral pharynx. Unlike KS, EKS is fulminant with less than a 20% two-year survival rate, especially if associated with opportunistic infections.¹ Kaposi's alone with HIV-positivity carries a somewhat more favorable prognosis.

Clinical Staging of KS

Staging is determined by the extent of the disease. The New York University (NYU) staging system³ divides KS into four stages: stage I, cutaneous, locally indolent; stage II, cutaneous, locally aggressive with or without regional lymph nodes; stage III, generalized mucocutaneous and/or lymph node involvement; and stage IV, visceral. Each stage is subdivided into two subtypes: (a) no systemic signs or symptoms, and (b) systemic symptoms.

The University of California, Los Angeles (UCLA) staging system⁴ differs from the NYU system in that patients with ten or fewer lesions or with lesions restricted to one anatomic area are classified stage I; those with more than ten lesions or more than one anatomic area are classified stage II; those with only visceral involvement are termed stage III; and those with both cutaneous and visceral involvement or pulmonary KS are termed stage IV. Likewise, this system has two subtypes for each stage, depending upon whether or not there are systemic signs or symptoms.

Radiation Therapy for EKS

Radiation therapy has been used in the treatment of KS with considerable success. A course of radiation lasting from one to three weeks potentially brings about a complete and durable response. However, the response rate in the AIDS patient with EKS varies. Complete tumor regression is uncommon, but partial regression and symptomatic relief or improvement in cosmetic problems has been observed in some of those treated. A brief two-week course of therapy is often used.

The typical distribution of classic KS in the elderly is in the lower extremities. Some of the sites of EKS that are treated with radiation therapy include the nose, hard palate, anal area and groin region. Treatment is often offered for relief of painful lesions and to improve the quality of life in these patients suffering from a very aggressive disease.

Chemotherapy for EKS

Many active agents are available for the treatment of KS, either singly or in combination. Single-agent vinblastine produces a ninety to ninety-five percent response rate, which lasts approximately one year.⁵ Because of the elderly age group affected by classic KS, caution should be used in using survival as an endpoint. A high re-

sponse rate does not necessarily translate into increased survival.

In the treatment of EKS, single-agent vinblastine or etoposide (VP-16) can be used in patients with minimal disease; however, early trials showed a disappointing response rate. In one study of thirty-eight patients using vinblastine alone⁶, one had a complete response, nine had partial responses, and nineteen had stable disease. Responses took four to five weeks to occur; many had relapsed after only nine weeks. These results indicate that the quantity of life for these patients was not substantially improved through chemotherapy; quality of life was not reported. In another study⁶, single-agent VP-16 was tried in large doses. A greater response was seen but with increased toxicity.

Currently, the best chemotherapy regimen available consists of weekly and alternating dosages of vincristine and vinblastine. Although each drug is equally efficacious against the tumor, the drugs' toxicities are quite different, allowing large doses of each to be better tolerated. This, hopefully, increases overall response. In a study of twenty-one patients using this regimen⁷, one patient had a complete response, eight had stabilized disease, and five had progression of disease. Other combination chemotherapy regimens are being tested, but the optimal chemotherapy is yet to be described. In general, higher responses are balanced by much greater toxicity.

Role of Interferon in Treatment of EKS

Interferon is a potent immune modulator. It has been shown to be antiviral and antiproliferative, and in some cell systems, it can even inhibit oncogenes as well as augment immunity. It is, therefore, reasonable that it is used in the treatment of a virally enhanced malignancy such as EKS. Of the three different kinds of interferon - alpha, beta, gamma - alpha interferon has had the most extensive study and testing.

Several recognized studies using alpha interferon have been conducted.⁸ The patients in these studies had poor prognostic factors (B symptoms, including fever, weight loss, and night sweats) and prior opportunistic infections. There were no responses in this group, and ongoing trials now exclude these patients. It appears from these studies that people with minimal disease, absence of B symptoms, and less severely damaged immune systems respond best to alpha interferon.

To date, interferon has been approved by the FDA for the treatment of one malignancy in the United States: hairy cell leukemia. Doses are low (3 to 5 million units, every day or three times a week). Side effects (chills, fever) are minimal and disappear with acetaminophen. Doses used in interferon trials in EKS are considerably much larger (36 to 50 million units a day given every day or five days a week every other week). Toxicity at these doses is substantial and is difficult to treat. Major responses have been few, e.g., 1 of 36 patients, 5 of 30 patients, and 4 of 27 patients in three different studies.⁸ Other side effects in-

AIDS IN ARKANSAS 1988

January 1 - March 10, 1988

Total number of cases reported		27	CASES BY AGE GROUP	
Number of deaths		10	Less than 20	0
			20 - 29	10
			30 - 39	11
			40 - 49	2
			50 - 59	0
			60 or more	4
CASES BY SEX				
Male		23		
Female		4		
CASES BY RACE				
White		19		
Black		8		
CASES BY RISK GROUP				
Homosexual/Bisexual*		18		
IV Drug User		2		
Hemophiliac		0		
Transfusion		3		
Heterosexual		1		
NIR#		3		
* Out of the 18 homosexual/bisexuals, three are/were IV drug users				
# No identified risk group (NIR)				
			OPPORTUNISTIC DISEASE	
			Pneumocystic Carinii	12
			Kaposi's Sarcoma	2
			Pneumocystis Carinii and Kaposi's Sarcoma	0
			Other	13

AIDS IN ARKANSAS 1985 - 1988

Total number of cases reported		117	CASES BY AGE GROUP	
Number of deaths		65	Less than 20	0
			20 - 29	41
			30 - 39	49
			40 - 49	18
			50 - 59	3
			60 or more	6
CASES BY SEX				
Male	108			
Female	9			
CASES BY RACE				
White	92			
Black	25			
CASES BY RISK GROUP				
Homosexual/Bisexual*	89			
IV Drug User	14			
Hemophiliac	0			
Transfusion	5			
Heterosexual**	3			
NIR#	6			
OPPORTUNISTIC DISEASE				
			Pneumocystic Carinii	57
			Kaposi's Sarcoma	6
			Pneumocystis Carinii and Kaposi's Sarcoma	3
			Other	51

* Out of the 89 homosexual/bisexuals, 19 are/were IV drug users

** The three heterosexual cases represent two female contacts to IV drug users and the six NIR [No identified risk group] represent two (2) male contacts to prostitutes.

No identified risk group (NIR)

clude confusion, elevated transaminases and severe lethargy.

According to guidelines proposed by P. S. Volberding, M.D.⁵, therapy for AIDS and KS should include first and second options based upon disease characteristics. The use of chemotherapy or alpha interferon for minimal tumor extent or extensive disease should be based upon whether the patient presents with favorable or nonfavorable factors.

Locally symptomatic lesions, i.e., lymphedema or painful necrotic lesions, should be treated with radiation therapy, which very often produces favorable results.

Other Malignancies Found in AIDS Patients

Non-Hodgkin's Lymphomas

HIV-positive patients with non-Hodgkin's lymphomas (NHLs) have the high grade, rapidly-growing B cell lymphomas, probably due to a polyclonal and later a monoclonal activation of B lymphocytes by a concurrent virus, such as Epstein-Barr virus, CMV or the HIV itself. Four to 10% of AIDS patients will get an NHL, including Burkitt's lymphoma and immunoblastic B cell lymphomas, both of which are extremely aggressive and difficult to treat. Ninety-one percent of the lymphomas in HIV-positive patients are high-grade, whereas typically only five to ten percent of lymphomas that present in the United States are high- or intermediate-grade.⁹

Extranodal involvement at presentation, including central nervous system, pericardium, gastrointestinal tract, bone marrow, kidney, rectum and adrenal glands, is common. By definition, these are stage IV aggressive NHL's.

High-grade lymphomas in young, fairly healthy people are treated aggressively with chemotherapy, e.g., MACOP-B (methotrexate with leucovorin rescue, doxorubicin [Adriamycin], cyclophosphamide, vincristine [Oncovin], prednisone, and bleomycin); CHOP-Bleo (cyclophosphamide, doxorubicin, vincristine, prednisone and bleomycin); and M-BACOD (methotrexate, bleomycin, doxorubicin, cyclophosphamide, vincristine, dexamethasone) because these lymphomas are sometimes curable.

In contrast, AIDS patients with NHLs have a 78% relapse rate after extremely aggressive chemotherapy. In one study mortality after chemotherapy was 73%. Many had autopsies, and, of these, nearly all had residual lymphoma.⁹ Although the prognosis remains poor, most authorities believe that AIDS patients who are otherwise healthy at the time of presentation should be treated with aggressive chemotherapy for cure.

Controversy exists over whether or not Hodgkin's disease (HD) is increased in HIV positive persons. Since the majority of AIDS patients to date have been young males (a group with a relatively high rate of HD), a statistically significant increase in HD attributable to HIV infection has been difficult to prove, although the San Francisco experience¹⁰ suggests the incidence and virulence may be increased in this population. Full, combination, standard

chemotherapy should be given in HIV-positive patients with HD, unless they are extremely debilitated by other malignancies or opportunistic infection.

Other Secondary Cancers

Other tumors found in HIV-positive patients include cloacogenic anal carcinoma, rectal lymphoma and squamous cell carcinomas of the head and neck. Of note are the head and neck cancers in patients who were young and who denied ethanol or tobacco risk factors.¹¹ Small cell and adenocarcinomas of the lung have also been reported.

As the epidemic spreads into the heterosexual population, more data can be gathered concerning the relative risks of these various malignancies.

Summary

EKS should be treated fairly aggressively based on histologic type. Even though radiation therapy has had much success in the curative treatment of KS, its benefit in the treatment of EKS is mostly palliative, but nevertheless very important. With the rapid growth rate of EKS, treatment should be tailored with the patient's wishes (for cosmetic purpose or to relieve symptoms) and with his underlying immunodeficiency.

Other HIV-related neoplasms should be treated using an individual approach according to the condition of the patient, tumor type and prognosis. Since most treatment will be by definition palliative, care must be taken to avoid undue morbidity from overly aggressive radiation therapy, chemotherapy or surgery.

Acknowledgment

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Interdisciplinary Approach to Arthritis Rehabilitation

Pamela S. Brown, M.D., R. Barry Sorrells, M.D.,
Thomas M. Kovalski, M.D., and F. Patrick Maloney, M.D.*

Introduction

Arthritis in all of its forms is perhaps the most prevalent cause of disability in the United States. There are 36 million people in the U.S. with some form of arthritis and estimates for Arkansas are that 230 thousand are affected. It is believed that five percent of the patients seen by rural family practitioners have arthritis. The manifestations of arthritis can be systemic, neurologic and musculoskeletal. The focus of this paper is the comprehensive rehabilitation of the two most common types, rheumatoid arthritis (RA) and osteoarthritis or degenerative joint disease (DJD).

Interdisciplinary Arthritis Approach

Rehabilitation is an interdisciplinary team approach to management. Interdisciplinary is interactive and integrative among team members rather than multidisciplinary which may have many disciplines acting independently. The latter approach tends to encourage fragmented care, whereas the former sets out an integrated plan of management with team member's goals being more clearly defined. For ongoing care, the team meets to develop and update therapeutic goals. Team members in an arthritis clinic include physicians (orthopedic surgeon, rheumatologist, physiatrist), a nurse, physical therapist, occupational therapist, and social worker. At Arkansas Rehabilitation Institute (ARI), the rheumatologist is a core team member with the orthopedist and physiatrist acting as consultants. A comprehensive evaluation includes a determination of the type of arthritis, the extent of the disease, and a detailed assessment of the patient's functional level. Clinic recommendations may include appropriate medication, physical

or occupational therapy, orthotic or other assisting devices, home programs, and opinions regarding surgery as an appropriate alternative if indicated. These results are given to the patient and to the patient's primary care physician for his or her disposition. The recommendations of the team will depend on the degree of arthritic involvement, the activity of the disease, and the availability of resources to deliver treatment.

Treatment

Medication

The standard sequential order of five to seven drugs used for arthritis in the 1960s has changed as more alternatives have emerged. A host of non-steroidal, anti-inflammatory drugs have been introduced, increasing the flexibility of arthritis medical management. NSAID's (including salicylates) have the property of inhibiting the production of prostaglandins and leucotrienes. These drugs are fast-acting and help to reduce the signs and symptoms of joint inflammation. Their main side effects are gastrointestinal and renal. Gold salts, antimalarials and penicillamine are slow-acting drugs. Gold salts first used in the 1930s for the treatment of rheumatoid arthritis were abandoned because of side effects that include bone marrow depression and kidney damage. With better control measures, gold salts have regained popular usage but are restricted to those patients who are dependable and have a synovitis not responsive to more conservative medical management. Skin rashes and stomatitis are now the most common side effects; however, bone marrow depression and renal toxicity still occur. Hydroxychloroquine is the drug of choice among the antimalarials. Visual disturbances have not been reported in patients receiving less than 600 mg a day of plaquenil; however, eye examinations before and every six months are required with treatment. Penicillamine also

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may cause bone marrow depression, nephropathy and secondary immune complex diseases such as polymyositis, a lupus-like syndrome and myasthenia gravis, and is used with extreme caution. Steroids, once quite popular for the treatment of RA because of their anti-inflammatory effects, are now used sparingly. These drugs have little effect on the progression of joint destruction. Steroids should only be prescribed for patients who would be severely handicapped without them. Among the serious side effects often documented with long-term steroid use are severe osteoporosis (leading to compression fractures of the spine), peptic ulcers and myopathy. When steroids are prescribed, it is usually best to combine their use with slow-acting agents.

Analgesics with non anti-inflammatory action should not be used alone, since joint damage secondary to inflammation may continue despite pain relief.

Occupational Therapy

Goals of therapy for joint disease include reduction of pain, maintenance of joint range of motion and muscle strength, prevention of deformities and maximization of functional independence. Occupational therapists can provide adaptive equipment and teach techniques for joint protection and energy conservation. These methods minimize joint stress during activities of daily living such as dressing, bathing, and feeding and allow the patient to achieve his or her highest functional potential. Adaptive equipment includes a host of specialized but often simple measures such as enlarged handles on eating utensils and doors for patients with hand involvement, or reachers for those with shoulder involvement. Patients with knee joint pain or inflammation may benefit from raised toilet seats or elevated chairs.

When counseling the patient in joint protection and energy conservation, the occupational therapist evaluates the patient's usual daily routine. The patient is then advised of ways to perform daily tasks which avoid positions leading to deformity and using each joint in its most stable position. The principle of energy conservation is that the patient carry out activities with ease and comfort. Exercises performed with alternating rest intervals or done intermittently rather than for prolonged periods are advised. Patients are taught to use rest during the day's activities to improve their overall endurance.

Occupational therapists also fabricate splints. Therapeutic splinting is used to immobilize inflamed joints. This eliminates painful movement, allows muscle relaxation and prevents stress on the joint until the inflammation decreases. Splinting may prevent deformities such as ulnar drift of the carpal bones with radial drift of the hand on the forearm. These deformities usually result from chronic improper joint positioning.

Physical Therapy

While it has not been proven that physical therapy programs change the course of disease, the maintenance of

muscle strength and joint range of motion may prevent contractures and enhance the outcome of surgical candidates. Isometric exercises are usually preferred for arthritics since these exercises produce maximum strengthening with the least possible joint stress. As little as six isometric contractions a day can significantly increase muscle strength. Isometric quadriceps muscle and gluteal muscle exercises maintain strength in large joints that act as shock absorbers. Joint range of motion can be passive, with the assistance of a therapist or mechanical device, active without assistance or with resistance. The degree of inflammation of the joint determines which type of ranging exercise is appropriate.

Heat and cold modalities relieve pain, stiffness and decrease muscle spasm. These modalities do not affect the basic joint pathology but act directly and indirectly on local nerve and vascular supplies. Heating modalities include moist heat packs, ultrasound, paraffin baths, whirlpool and a heated swimming pool. The effects of heat and cold in the treatment of arthritis were reviewed by Lehman and Delateur. Muscle spasm and pain can be relieved by heat through the reduction of muscle spindle sensitivity. Joint stiffness is reduced by the ability of heat to change the viscoelastic properties of joints. Cold acts by alternating vasoconstriction with vasodilation and reducing the local metabolic rate to reduce pain and muscle spasm. Types of cold modalities include ice massage, ice and water mixtures and chemical cold packs. Many arthritic patients can be taught techniques to use these cold modalities safely at home. As part of the comprehensive rehabilitation process, patients are taught a home program of exercises, range of motion, and heat or cold application to maintain their level of function in the home.

Orthopedic Surgery

Arthrodesis

Most of the orthopedic surgical procedures employed today in the treatment of arthritic joints were not available 25 years ago. Prior to the late 1960s the orthopedic surgeon was limited to joint arthrodesis (fusion) as the only predictable procedure for pain relief in the crippled arthritic patient. While effective in relieving pain, this procedure has the obvious result of eliminating joint motion and, therefore, often proved even more functionally disabling to the patient. While still recommended in certain select cases, this procedure now is only occasionally used in major weight bearing joints. Spinal and small joint arthrodeses are still commonly employed.

Synovectomy

Synovectomy is the removal of the diseased joint lining. In rheumatoid arthritis, it has been shown to impede the progress of joint destruction. While widely used in the past as a primary procedure, it is more commonly used today as an adjunct to joint reconstruction.

Osteotomy

Osteotomy is used to correct malalignment of joints primarily about the knee. It must be performed at an early stage before bony degenerative changes occur. Reversal of these changes with osteotomy has been disappointing, frequently necessitating a reconstruction procedure within a few years.

Arthroscopy

Arthroscopic surgery with debridement of damaged articular cartilage, removal of the degenerated menisci, loose bodies, and small osteophytes remains a reliable procedure in the patient with early disease. In general, this procedure is ineffective in the patient with advanced disease.

Arthroplasty

Hip arthroplasty in the form of joint replacement dates back only 25 years. The development of the currently utilized metal to plastic joint replacement and its fixation to bone with acrylic cement began with Dr. John Charnley in England. He successfully implanted the first large series of hip replacements using polyethylene acetabular cups and metal alloy femoral components. He secured the prosthesis to bone with methacrylate as a fixation substance. With these components and those of similar design, there have now been hundreds of thousands of hip joint replacements with follow-up as long as 25 years. These materials and their improved counterparts have demonstrated excellent wear resistance.

The hip joint, a ball and socket articulation, is easy to duplicate biomechanically, and the major refinements in the last 20 years have been in attempts to more closely mimic the anatomic shape of the proximal femur. Most of the acetabular cups are now metal backed to improve fixation and wear properties. Hip replacement has proved a reproducible procedure with predictable beneficial outcome to the patient.

Advancement in the replacement of the arthritic knee joint has progressed more slowly because of the complex geometry of the knee. Many early design knee replacement prostheses failed to allow for rotatory motion in the knee and loosening of the tibial component proved to be a problem. Newer designs which biomechanically duplicate the normal knee anatomy and motion have demonstrated good long-term results. Results are now obtained which compare favorably with those achieved in hip arthroplasty. One can anticipate good to excellent results in excess of 90% of the operated knees. With newer designs, wear properties are enhanced and there is good laboratory evidence to indicate longevity of 30 to 40 years.

Although the rate of success with methacrylate fixation has been very high, there has been a significant incidence of loosening in the cemented prosthesis. Frequently, the loosening does not occur for as long as five or more years. Improved cementing techniques have lessened this

complication. Ironically, now there is considerable experimental work being done to eliminate methacrylate, the material that made arthroplasty possible in the first place! Porous, coated, metal components which allow bony and fibrous tissue ingrowth show great promise as a means of long-term fixation which should result in a significant decrease in the incidence of loosening. Experimentation continues toward the development of newer materials to more closely approximate the physical qualities of bone. Synthetic composites, metals such as titanium, and ceramic components are being studied.

While hip and knee arthroplasty are the most frequently employed joint replacement, we can now replace shoulder, elbow, wrist, finger, ankle and toe joints successfully.

Orthopedic Rehabilitation

Successful completion of the operative procedure is only a part of the overall orthopedic responsibility. A complete and comprehensive rehabilitation program is tantamount to eventual success.

Early motion in the operated joint is necessary to prevent stiffness and contracture. The mechanical constant passive motion machine in which the patient rests the operated limb and is passively exercised by the electrically driven mechanism assures early motion.

Early physical and occupational therapy aid in the return of the patient to a functionally independent level of activity. Two weeks from surgery, the hip or knee replacement patient is usually rehabilitated adequately for return to their home environment. An interdisciplinary approach as described above has proved to be a superior means of rehabilitation.

Summary

The foregoing discusses a comprehensive interdisciplinary approach to patients with arthritis. Osteoarthritis and rheumatoid arthritis, the two most common types, were used as models for the purposes of this article. Similar approaches are used for other types of arthritis, but the details of their management may vary and are beyond the scope of this paper.

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ELECTROCARDIOGRAM OF THE MONTH

Andy Connaughton, M.D.
John W. Watson, M.D.
UAMS Division of Cardiology
Little Rock, Arkansas

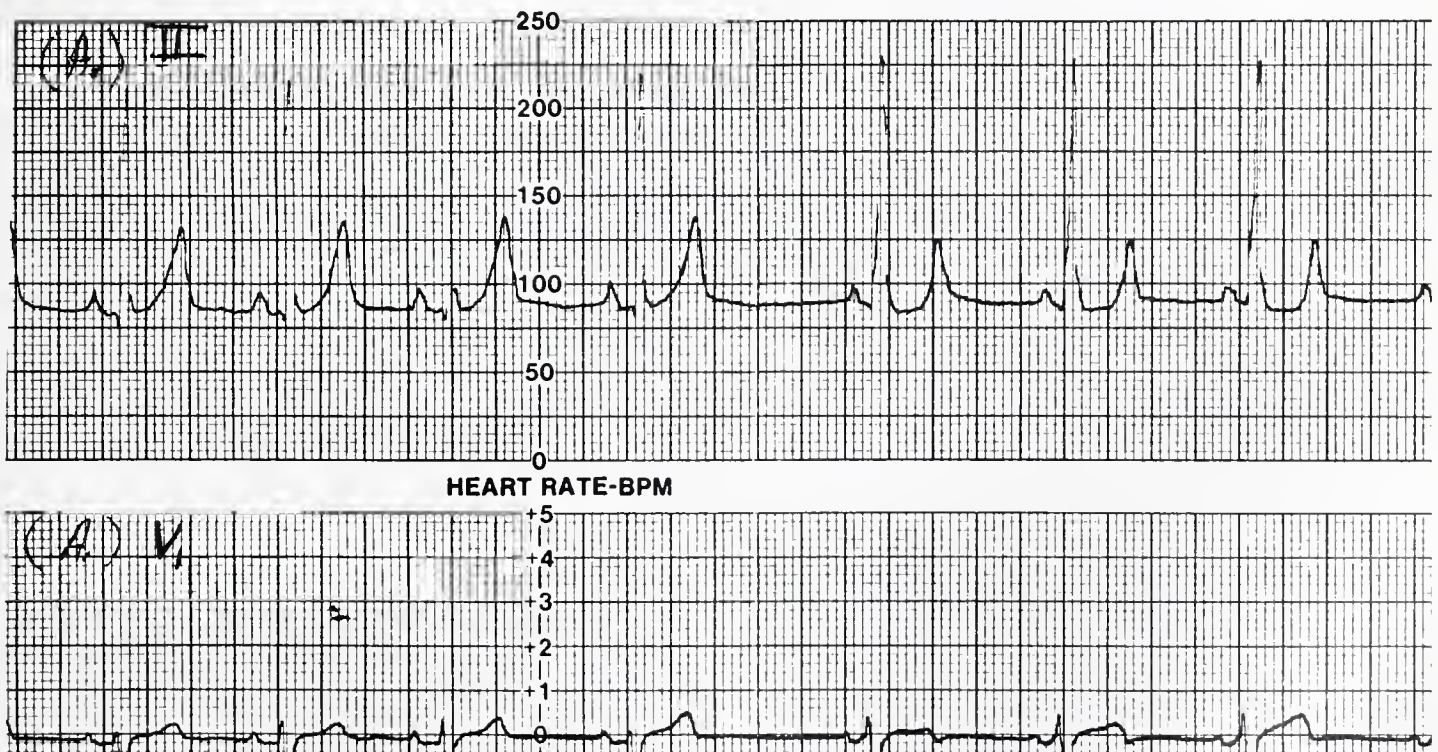
CLINICAL HISTORY:

L. M. is a 7-year-old boy who has had a long history of palpitations. The strips shown represent sections of a Holter scan and correspond roughly to standard limb lead II and precordial lead V₁, simultaneously recorded. What do you think?

DISCUSSION:

The upper pair of leads (A) demonstrates normal conduction for the first four complexes. The PR is normal and there is no delta wave in the first four complexes. Then, the PR shortens to less than 0.12 seconds and a delta wave becomes evident, especially in the 5th complex. The lower pair of leads (B) shows what most probably represents Wolff-Parkinson-White arrhythmia at the rate of 190 beats per minutes.

The editor wishes to thank Dr. Connaughton for his assistance with this month's ECG.



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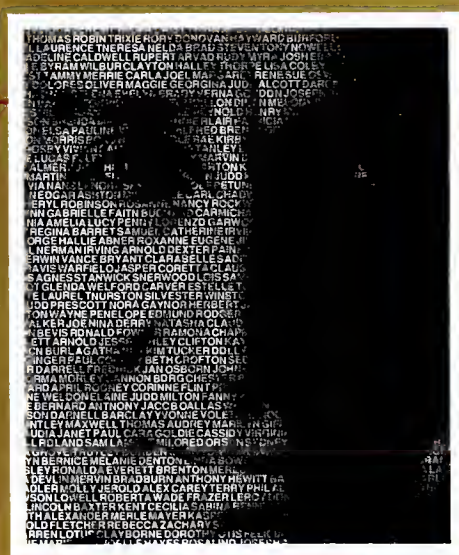
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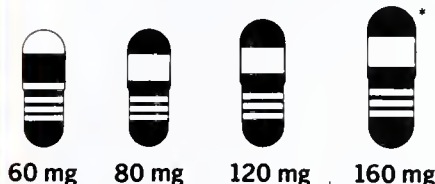
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DESCRIPTION. INDERAL LA is formulated to provide a sustained release of propranolol hydrochloride. INDERAL LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure, and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

INDICATIONS AND USAGE. **Hypertension:** INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock; 2) sinus bradycardia and greater than first-degree block; 3) bronchial asthma; 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it is usually advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing T_4 and reverse T_3 , and decreasing T_3 .

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL: Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

CLINICAL LABORATORY TESTS: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL (propranolol HCl) is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered a calcium-channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardial contractility or atrioventricular conduction. On rare occasions, the concomitant intravenous use of a beta blocker and verapamil has resulted in serious adverse reactions, especially in patients with severe cardiomyopathy, congestive heart failure, or recent myocardial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol. Ethanol slows the rate of absorption of propranolol.

Phenytoin, phenobarbitone, and rifampin accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased plasma levels of both drugs.

Antipyrine and lidocaine have reduced clearance when used concomitantly with propranolol. Thyroxine may result in a lower than expected T_3 concentration when used concomitantly with propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS: INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

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ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

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Gastrointestinal: Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: Bronchospasm.

Hematologic: Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: Alopecia, LE-like reactions, psoriasisiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL Tablets to INDERAL LA Capsules, care should be taken to assure that the desired therapeutic effects be maintained. INDERAL LA should not be considered a simple mg-for-mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

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Muscular Dystrophy Association, Jerry Lewis, National Chairman

Controlling the Medical Magazine Monster

(or how not to be buried alive under a mountain of journals)

James K. Patrick, M.D.*

Staying current in the field of Family Practice is a formidable task. Unless one has a reasonable approach to handling the reading volume, it is easy to become overwhelmed. This article is the result of the author's experience, augmented by a survey of residency directors and practicing family physicians. It is hoped it will be a guide to more enjoyable reading of our literature.

The practicing family physician has the daunting task of staying current in the broadest field of medicine. This may also be a source of apprehension to the medical student considering family practice as a speciality. And the fear is not entirely unfounded judging by the volume of related journals that come across my desk.

For one year, I kept every medical journal mailed to me. (Before that, I stacked the journals by my desk until I could no longer open the top drawer, then tossed them all away and started over). I elected to receive the *American Family Physician*, *Journal of Family Practice*, *Journal of the American Medical Association*, and the *Journal of the Arkansas Medical Society*. In addition, I receive a multitude of free-of-charge journals, "throw-aways", and medical newspapers. Once a year each journal comes with an attached post-card which states that it must be signed and returned should I wish to continue receiving the journal. I have never returned even one of these cards. Nevertheless, the same journals show up year after year.

Postal regulation 411.2 allows the bulk mailing rate to organizations who publish periodicals for purposes other than the advancement of their own business interests.¹ Ad content can be no more than 75%. The subscription list must be kept current and presented to the postal service every three years (the reason behind those attached post cards). The bulk rate is \$0.26 per average issue or \$18

postage for my monthly 35 pounds of journals. The yearly cost is \$218, and if all 55,000 members of the American Academy of Family Practice receive the same volume as myself, annual postage costs would total \$12 million.

During one calendar year I received an average of 70 journals per month. The average monthly stack was 15 inches high and weighed 35 pounds. I produced a list of the twenty most popular topics for that year by examining each table of contents (Table I). Collating the texts of the journal articles revealed gross repetition of content.

When I attempt to discard an issue of a journal, my fingers just won't let go until I scan the table of contents. I invariably find one or more articles that I mark for later reading or scanning. Family physicians, I think, are particularly susceptible to being hooked in this manner, since our interests are so wide.

I find that colleagues in other specialties usually subscribe to three or four journals devoted to their specialty and try earnestly to keep current in their field. Of course, the more primary care they deliver, the greater is their breadth of interest and their quantity of reading material. How do family physicians approach the task?

Surveying Family Physicians

A questionnaire was sent to two groups of family physicians. One group consisted of 373 directors of family practice programs throughout the country. In addition to completing the questionnaire, they were asked to furnish the names and addresses of two practicing family physicians in

* Area Health Education Center - Northwest, 241 West Spring Street, Fayetteville, AR 72701.

TABLE I. Top 20 Subjects in Order of Frequency

Subject	Number of Times Articles Appeared in 1984
Cardiac Ischemia	43
Cardiac Arrhythmia	37
Cardiac Failure	33
Arthritis	32
Infectious Disease	32
Pain Management	32
Diabetes	29
Myocardial Infarction	26
Exercise and Fitness	26
Computers in Practice Management	23
AIDS	20
Hypertension	20
Asthma	17
Breast Cancer	17
Upper Respiratory Infection	17
Chronic Obstructive Lung Disease	15
Duodenal Ulcer	15
Respiratory Distress Syndrome	15
Immunizations	15
Alcoholism	14

the area who were regarded as keeping abreast of the field. The same questionnaire was then mailed to 286 of these practicing physicians. Questionnaires were returned by 69% (257) of the directors and 58% (161) of the practicing physicians.

Generally very little difference was found between the directors of residency programs and practicing family physicians. The most popular journals were the *American Family Physician*, the *New England Journal of Medicine*, the *Journal of Family Practice*, and the *Journal of the American Medical Association*. Table III lists the remaining preferences. The majority of respondents indicated that they read approximately 25% of the contents of each issue. Scanning the table of contents was the favorite manner to

select article to read. The second most utilized method was browsing through the abstracts of articles.

A slight majority of respondents felt their reading habits were deteriorating as time in their career progressed.

Leisure reading consisted of newspapers, magazines and nonfiction books in that order. The majority estimated that television viewing occupied two to four hours of their time per week.

Discussion

Periodically the Department of Medicine at McMaster University Faculty of Health Sciences in Hamilton, Ontario, Canada, publishes a series of articles in the *Annals of Internal Medicine* on "How to Keep Up With the Medical Literature."⁴ Their advice is directed toward internists and strongly condemns the reading of any article that is not original and peer reviewed. They also would limit reading to articles of direct pertinence to one's clinical practice. These articles give advice on how to review medical journals for breakthroughs in the field of internal medicine. The family physician would find this advice perplexing, since our interest is so broad. The family physician is seeking established protocols for treating their patients. Review articles, even if in "throw away" journals, seem to find their way into our reference files frequently. Residents utilize textbooks often in their efforts to establish a sound data base. It is true that as one's experience increases the appetite is more whetted by journal articles enriching the depth of our knowledge. It is also pertinent that information in the textbook is two years old by the time it is published.

The use of Medline by computer is now changing our ways of reading. This service connects us with the National Library of Medicine for readouts of the most recent articles pertaining to our immediate patient diagnostic and management problems. We can choose from a menu to order reprints of appropriate articles.

Variety is important and it would behoove us to choose three or four favorite journals. We should replace one of

TABLE II. Top Ten Journals by Group

Residency Directors		Practicing Family Physicians	
<i>New England Journal of Medicine</i>	99	<i>American Family Physician</i>	65
<i>American Family Physician</i>	83	<i>Journal of the American Medical Association</i>	33
<i>Journal of Family Practice</i>	68	<i>New England Journal of Medicine</i>	29
<i>Journal of the American Medical Association</i>	46	<i>Journal of Family Practice</i>	19
<i>Post Graduate Medicine</i>	25	<i>Medical Letter</i>	17
<i>Annals of Internal Medicine</i>	14	<i>Patient Care</i>	14
<i>Patient Care</i>	14	<i>Post Graduate Medicine</i>	12
<i>Medical Letter</i>	9	<i>Annals of Internal Medicine</i>	9
<i>Medical Economics</i>	7	<i>Hospital Practice</i>	9
<i>Family Medicine</i>	7	<i>Pediatric Notes</i>	8
Total Respondents	372	Total Respondents	215

A stack of unread journals not only clutters the office, but also clutters the mind.

these periodically with a different journal for exploration of its format and contents.

Few of the respondents in this study had a regular time to read. We all work reading time into our practice and family life schedules. Too many studies show that physicians appear to treat disorders in the manner in which they were taught in formal training, indicating lack of efficient continuing education.

Many physicians search for clarity and contentment in their reading habits. A stack of unread journals not only clutters the office, but also clutters the mind. The task is overwhelming until we learn to discard unwanted journals. As family physicians our needs are different, so we need to re-examine what we want from the medical literature. Our methods should set reasonable goals that give us the satisfaction of keeping current in our field.

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Maintaining Professional Autonomy: Strategies for Staying in Charge

Alan R. Nelson, M.D.
Chairman, AMA, Board of Trustees

The following speech was presented at the American Medical Association's National Leadership Conference, February 12-14, 1988 in Chicago, Illinois.

The theme of this year's conference is "Strategies for Success." Is this title simply alliterative or does it mean something? If it means something, what does it mean?

First, what does "strategy" mean? Louis A. Allen, a nationally famous management consultant, has provided the definition I will use, and has defined strategy as "the general approach to be followed in achieving an objective."

We will be engaged, then, in learning about approaches to achieving objectives - certainly a worthy mission for you leaders of American medicine. Systematic and formalized strategy planning is an integral part of how the AMA operates.

How is strategic planning accomplished? First, we forecast. A forecast is "an estimate or prediction of what will probably happen in the future." The purpose of a forecast is to anticipate needs and opportunities, not extrapolate economic data.

Then we identify objectives - results to be achieved. For organizational planning we develop a key objective. This is a statement of the primary end results that determine the nature and purpose of the organization and its components.

Then come key strategies - identification of alternative methods for accomplishing the key objective. Progress is measured systematically against key standards - benchmarks that assist in establishing major priorities.

At this conference, we will hear about forecasts and strategies necessary for planning future activities in regard to AIDS, political change, professional self-regulation, professional liability and public awareness. Planning strategies that are action oriented and directed toward achieving objectives will be emphasized.

Let me tell you again about the association key objective of the AMA, adopted by the House of Delegates just over a year ago. It was developed by the board and recommended to the house to guide and sharpen the focus of Association activities in the years ahead. It states:

The key objective of the American Medical Association is to contribute to the professional and personal development of member physicians and to the betterment of the health of the public by developing and distributing information; by advocating health-related rights, responsibilities, and issues; and by representing the profession as a whole where the image, expertise, and national scope of the AMA prove useful. This is to be done in a manner that is cost-effective, protects physician autonomy and self-determination, improves the practice of medicine, and builds public confidence in the competence and reliability of physicians.

Last year in my introductory remarks to this conference I focused on the last phrase in the last sentence, "builds public confidence in the competence and reliability of physicians," emphasizing our commitment to professionalism.

This year, I wish to examine the earlier portions of this important sentence - "protects physician autonomy and self-determination, and improves the practice of medicine."

I wish to discuss professional autonomy because I'm worried about the level of frustration and pessimism among members of the most respected, gifted and successful profession in history. Why are physicians so angry? Why are we, many of us, discouraging our sons and daughters from entering a profession that has been so good to us - one that we entered with such idealism and hope?

A major reason for our anger and disillusionment is the increasing erosion of our professional autonomy - the uncoupling of authority and responsibility. We are threatened

with loss of authority at key decision points in provision of care, while having the responsibility for the content and outcome of care still placed squarely on our shoulders.

For example, home care treatment plans are developed by home care specialists while we still retain responsibility, ICU protocols are developed by intensivists teams, but the family looks to the primary care physician as being the point where the "buck stops." Pharmacists seek to prescribe medications, nursing home routines are sent to us just for approval. Governance in hospitals may occur with very little physician input.

At a meeting of Sigma Theta Tau, an honor society in nursing with over 100,000 members, a leader in nursing is quoted as defining nursing as "the care of the sick, the potentially sick and care of the environment to assure the delivery of services." Medicine is defined as "the legal role of physicians to treat, diagnose, and operate on disease - everything else is nursing care."

"Managed utilization" is a term used to describe the variety of systems being encouraged by purchasers of care, particularly government and business, to curtail perceived excesses of use of medical services. The range of methods used includes prospective approval, clinical algorithms, concurrent stay review, discharge planning, retrospective payment review, mandatory second surgical opinion, high cost case management, formularies, physician incentive programs, and selective contracting. The nagging question comes up: "Who is doing the managing, and who is being managed?"

An ironic insight into the degree of erosion of our professional autonomy - the loss of authority at key decision points in the delivery of care - is provided by comments made to me by leaders of the British Medical Association in London last spring. These leaders of medicine in a nationalized system noted that the decision-making primacy of physicians in Britain was not challenged by payers, consumer advocates or non-physician practitioners as is the case in the United States. They clearly regarded their practices as being more 'free' than ours, even though their system of reimbursement has been controlled for four decades.

Finally, our professional autonomy is being challenged by skepticism and loss of confidence by our patients, themselves. The public is bombarded by healthcare information, some of it conflicting (or downright false) provided by the mass media.

If we are seeing a fragmentation of our autonomy - an uncoupling of the authority from the responsibility - because of intrusion of payers, encroachment by other health professions on turf previously controlled by physicians, and

because of a questioning public, the big question for us remains: What can we do about it? What are some strategies for protecting physician autonomy and self-determination?

But first, a brief forecast to anticipate needs and opportunities, understanding that forecasting is not an exact science. Remember that Yogi Berra said, "Making predictions isn't easy - especially when they're about the future."

Our forecast for the rest of this century can confidently predict some of the aspects of the professional environment: more physicians, more technology, more patient-initiated demand, more pressures for application of business principles to make care delivery more orderly and predictable, more pressures for standardization of diagnostic and therapeutic protocols, more insistence on informed participation by patients in the decisions.

These will be basic ingredients of the system and "deliverables" that society will insist upon. Whether the system is organized into supermeds is unimportant.

The nature of the setting will not change the basic facts of a patient population flooded with information: an increased demand resulting from new technology and patients' awareness of that technology, and an increasing number of high users as baby boomers gray. This demand will be met by the expanded numbers of bright, well-trained physicians who are willing to learn and apply business principles and explore methods of marketing (which is, after all, finding out what people want and making it available to them).

We will also have a new generation of physicians who chose medicine as a career despite gloomy predictions of less financial reward, and physicians who will be even more aware of, and guided by professional ethical interpretations. This will be the case because organized medicine will respond increasingly (as it is doing already) to physicians' need for guidance in an environment of new technology that blurs traditional definitions of life and death, and one of new and more complex relationships among doctors, patients, hospitals, and insurers, with business opportunities that create the potential for conflict of interest.

I wish to suggest three strategies for preserving and enhancing our professional autonomy as we finish this century and enter the next.

First, we must support and strengthen a unified "triple threat" organizational capability, with a willingness to take risks and with an enduring commitment to long-range goals and objectives. What does this mean?

Unity of purpose and coordination of efforts among organizations of physicians is essential if we are to retain our professional prerogative. Professional autonomy and pro-

***“Why are physicians so angry?
Why are we, many of us,
discouraging our sons and
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“Let me emphasize the importance of long-range strategies and staying power. We physicians are often impatient by our very nature. We must avoid disillusionment and unrealistic expectations for a quick fix.”

professional anarchy are incompatible. Adlai Stevenson said, “Astronomers of the world have no choice but to cooperate because there’s no one nation from which the entire sky can be seen.” Insularity is not a choice for us, either.

“Triple-threat” means that we must have the capability of fighting for professional autonomy in all three arenas - legislative, regulatory, and the courts.

Physicians instinctively shy away from risks and confrontation. However, the future of our profession is at stake, and aggressive initiatives are necessary. We must support independent campaign expenditures even if it pulls a congressman’s tail. It will be necessary to confront some non-physician practitioner organizations who want to practice medicine without a M.D. degree. And we will go to court if our rights and those of our patients are at stake and if there is any reasonable chance of success.

Did you know that AMA was involved in six cases before the United States Supreme Court in the last one and one-half years, all representing, in one way or another, the rights of physicians or their patients, in addition to federal court challenges to the MAAC provisions?

Finally, let me emphasize the importance of long-range strategies and staying power. We physicians are often im-

patient by our very nature. We must avoid disillusionment and unrealistic expectations for a quick fix.

Second, standards that guide our professional activity are being set. I have already referred to that new term that purchasers of care have adopted, “management utilization.” This euphemism encompasses a long list of systems designed to make us account for our professional decisions, and range all the way from prior authorization to selective contracting. Representatives of business have said “quality is what I say it is.” We - AMA - must continue to evaluate and disclose the results of these programs since they involve by their very nature, the potential for undercare and conflict of interest.

Specialties are developing their own standards for professional performance. AMA is, and will continue to be, a clearinghouse for such activity, coordinating it and identifying successful innovations as well as systems that don’t work.

We must analyze, rationalize and find the optimal within the wide variations in utilization and practice patterns that everyone agrees exists, but that no one knows to what benefit. The manifold differences in the profiles of care that modern data collection and display methodology



John Hestir, M.D., Arkansas Medical Society President-elect, accepted the 1987 Membership Award from William Hotchkiss, M.D., President of the American Medical Association, at the recent Leadership Conference held in Chicago. The award was given to acknowledge the third consecutive year AMS has exceeded the prior year's AMA membership.

are revealing have been described as the "Achilles heel" of medicine. AMA and the rest of medicine must continue efforts to define and apply standards of quality because setting standards is a standard we have set for ourselves.

Third, and last, we must forge and maintain alliances with those who represent, through their voluntary membership, our patients. AARP, as an example, has 27 million members and has the expert staff and political and social influence that go with those numbers. We maintain ongoing communications with them at the national level.

We can, and must emphasize the areas in which we cooperate. We have taken cooperative positions on prescription drug advertising, on living will legislation, medicare catastrophic coverage reform, strengthening state licensing authority and on a number of preventive health care issues.

Physicians instinctively become uncomfortable about issues in which we are at basic disagreement with AARP, and with good reason: they represent many of the people that we care for in our offices and hospitals. Forming alliances at the grass-roots level is, perhaps, more important than at the national level. And the potential exists for important cooperative efforts, ranging all the way from using the experience and skill of retirees in voluntary programs to provide counseling for troubled adolescents in our adolescent health initiative, to working with local senior groups to

identify those medicare patients who fall below income thresholds and deserve consideration for voluntary acceptance of medicare payment assignment.

Why are working coalitions with consumer groups so logical? Because, to us, they are not clients as they are to home care workers; not beneficiaries as they are to third-party carriers; not recipients as they are to Medicare administrators; not a denominator population as they are to the health economist. They are our patients, and we accept their care as our responsibility.

You are here because you have been selected by your peers to lead them. You are in the front ranks of 550,000 of the brightest, best trained, hardest working, most compulsive men and women in the world. We must accept the call to leave a legacy for the next generation of physicians: a professional environment in which they have the authority to make decisions on behalf of their patients with a responsibility that is realistic and in appropriate balance.

Those whom we serve will increasingly reach out for a steady hand. They need us now and will, even more, in the turbulent times ahead.

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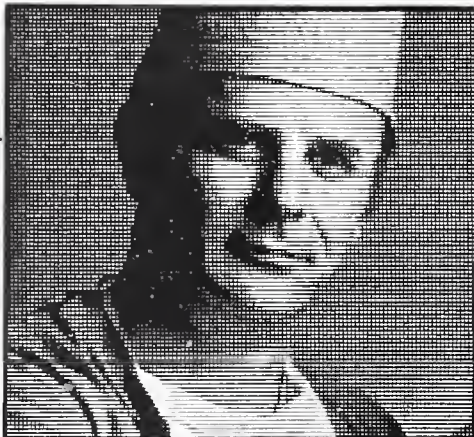
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Interruption of the Inferior Vena Cava Above and Between the Renal Veins

Alejandro Arpayoglou, M.D. and Beatriz Cassanello de Arpayoglou, M.D.*

Introduction

There are many instances in which the surgeon may need to interrupt the inferior vena cava (IVC) above or between the renal veins. Among them are right nephrectomies for malignancies or pyonephrosis and retroperitoneal dissections, in which the IVC can be primarily involved by the pathologic process or can be damaged incidentally during the procedure; operations upon the liver for tumors and hydatid cysts; primary tumors of the IVC itself, such as leiomyosarcomas; and trauma to the abdomen.

The subject is reviewed from clinical, anatomical and experimental points of view. Ligation of the IVC above the renal veins (RV) has been considered fatal for many years; however, a review of the literature shows that it is possible to interrupt this particular segment of the IVC with recovery. Procedures for reconstruction of this portion of the IVC are reviewed.

Acute Interruption of the Suprarenal IVC

There are reports of some patients who have sustained acute interruption of the suprarenal IVC with survival. The most common situation is an accidental injury to the IVC when performing a right nephrectomy for cancer,^{1,2,3,4} Will's tumor, or suppurative processes of the right kidney.^{5,6}

Deucher² and Laurian performed a reno-portal and a cava-portal end-to-side anastomosis, respectively, in their patients. Couinaud⁷ performed an interruption of the IVC anastomosing the LRV to the upper and the RRV to the lower caval stump. Kuss implanted the LRV into the upper segment of the IVC, and Brewster autotransplanted the right kidney into the pelvis.

Other papers report injury to the suprarenal IVC by bullet⁹ with ligature in both cases. Several cases of retroperitoneal tumors with involvement of the IVC have been reported⁴ as well as a case of right neuroblastoma⁹ to another of right hepatectomy.¹⁰ In all these cases the suprarenal IVC was interrupted.

Of the 24 cases reported, most developed temporary lower extremity edema and a few required dialysis for varying periods. Several observations can be made when analyzing these cases:

1. Operations were performed on adult and pediatric patients for a great variety of conditions,
2. Twenty-one of the 24 patients had a right nephrectomy which probably contributed to survival.
3. In 19 cases, the continuity of the IVC was not restored and some surgeons place ligatures both above and below the renal veins.
4. No permanent lower extremity edema developed in most of the patients.
5. In most cases, considerable collateral circulation developed afterward.
6. Interruption of the IVC above the renal veins is often tolerated if some precautions are taken.

When managing these patients, Caplan¹¹ suggested a preoperative cavagram to see the degree of caval obstruction as well as the extent of the collateral channels; a thoracoabdominal approach in light that most incidental injuries to the IVC occur when the conventional flank incision is used; all intravenous infusion given in the upper extremities; and simple lateral suture of the cava may control the condition satisfactorily with lesser injuries.

In addition, Caplan stated that if a portion of the suprarenal IVC is excised or if ligation in this area appears absolutely necessary, the vessel is temporarily cross-clamped above the renal veins and the renal function is estimated by determining the appearance time of indigo-carmin in the

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sider. The caval pressure below the renal veins is measured at this time. If kidney function is satisfactory and if the pressure is less than 300mm of saline, then ligation can be performed. Obviously, if renal function is severely impaired, the ligation is not done.

Temporary dialysis and anticoagulants, according to Caplan, may be required post-operatively.

Caval Interruption Resulting from Trauma

Trauma is responsible for more complicated types of IVC interruption, aggravated by associated multiple organ injury, hemorrhage, and bacterial contamination.

In a recent report on 301 injuries to the IVC, there were 84 cases of injury above the renal veins.¹² Mortality was 52% for injuries of the suprarenal cava, despite the use of intracaval shunts and occluding balloons as ancillary techniques. The most significant improvements in survival in recent years has been in patients with renal and infrarenal caval injury; since 1970 the mortality has been 17% and 25%, respectively. Improvement in survival can be attributed to such advances as autotransfusion and micropore blood filters in the overall management of the seriously injured.

In some series, a higher incidence of suprarenal caval injuries has been noted. It is possible that the more efficient paramedic ambulance systems have resulted in patients arriving alive with these complicated injuries.

Turpin and associates¹³ presented a case of gunshot wound to the liver with injury to the intrahepatic vena cava at the level of the middle hepatic vein. Ligation of the suprarenal vena cava was performed. Urinary output was adequate the first hospital day except for gross hematuria. Later dialysis was required and the patient succumbed to sepsis, gastrointestinal bleeding and multiple system failure.

Madding and colleagues state that injuries to the suprarenal vena cava below the liver may prove to be quite challenging. Anterior lacerations must be enlarged sufficiently to allow for an inspection of the posterior surface area from within. Repair of a posterior wall laceration is best accomplished through the anterior wall opening.

Pilcher presented an experimental and clinical study of the use of a retrohepatic vena cava balloon shunt inserted via the groin. Kairaluoma¹⁴ used temporary occlusion of the hepato-duodenal ligament, the supra and intrahepatic IVC and the supraceliac aorta by vascular clamps in treating a severe blunt injury of the liver with laceration of the vena cava.

Dingeldein reported the case of a stab wound with an aorto-caval-portal-duodenal fistula with recurrence after surgery as an aorto-caval fistula. The patient was successfully treated.

Experience in Dogs

In 1898 Purpura studied 44 dogs and noted that survival was much lower when the IVC was ligated above the renal veins rather than below. In 1904 Gosset and Lecene stated

that death always resulted from ligation of the IVC above the renal veins. There was marked congestion and engorgement of the lower half of the body and death occurred from shock due to accumulation of blood in the caudal portion of the body.

Sapirstein and Reiniger found that nine of ten dogs survived ligation when right nephrectomy was added, while none survived if the right kidney was left in place. Lespinasse found that ligation above the renal veins with excision of the right kidney in one stage was successful in 41 of 43 animals. Removal of the right kidney diminished the venous load on developing collateral circulation. Congestion and edema below the ligation site was a prominent feature.

Nesbit successfully carried out ligation of the IVC above the renal veins in five dogs. He reviewed the literature and studied the collateral circulation. He stated that the lumbar, vertebral and azygos veins are the most important collateral routes.

Anatomy and Physiology

The IVC has a complex embryonic development and can present numerous variations. The venous circulation below the diaphragm goes through four axial pathways interconnected by transverse segmental arches. The longitudinal axes are the IVC, the ilio-lumbar veins, vertebral venous system and the anterior axis with its two elements, one being an anastomosis between superior and inferior epigastric veins and the other being subcutaneous. The IVC ends in the right atrium, and the three other systems connect both caval territories.

The Vertebral System

In brief, the vertebral veins are valveless, plexiform networks with a longitudinal pattern. They parallel and communicate with the superior and inferior vena cava.

Batson classified the veins of the human body into two main groups: those within the pressure chamber of the thoracoabdominal cavity, and those outside of this cavity.¹⁵ Within the body cavity there are the caval, the pulmonary, the portal and the lumbo-azygos veins. Lying outside the cavity are the veins of the extremities. These vessels are continuous with the veins of the vertebral column. The vertebral vein system parallels joints and at the same time bypasses the cavity veins. It unites the superior vena cava to the IVC lie the azygos veins, but outside the pressure cavity.

The Ureteral and Genital Axis

The ureter is surrounded by a venous network which connects the hypogastric plexuses and the renal veins. The utero-ovarian veins are connected with the hypogastric plexus below and through it with extra-pelvic veins and the vertebral venous system. Cephalad, the right ovarian vein, ends in the infrarenal IVC and the left into the LRV. In cases of thrombosis or ligation of the infra-renal IVC the

utero-ovarian veins become enlarged and some authors believe that embolic accidents after IVC ligation are through this pathway, which some surgeons interrupt.

Reno-Suprarenal System

These are numerous capsular veins coming from the kidneys which empty into extrarenal arcades. These connect with all neighboring vessels: the IVC, azygos, suprarenal, lumbar and 12th intercostal veins. Their value as collaterals has been demonstrated in autopsies of patients with old thrombosis of the IVC.

The right renal vein is very short and does not have any side branches; the left, on the other hand, has numerous anastomosis. In 88% of the specimens there is a conspicuous connection between the hemi-azygos and the LRV. This channel is termed the reno-azygos-lumbar trunk. The LRV is situated at the core of an impressive set of venous plexuses and veins. The inferior phrenic and suprarenal tributaries enter from above, while spermatic or ovarian, capsular, lumbar, ascending lumbar veins (and occasionally an anomalous vena cava) enter from below. Additional communications are with the azygos and hemiazygos veins and with the vertebral plexuses.

Surgical Treatment

It is possible to interrupt the IVC by ligation above the renal veins with complete recovery of the patient, as some of the literature illustrates. However, there are many situations in which the surgeon may be able to re-establish partial venous circulation. Some of the possibilities are discussed below.

Interruption of the cava

Caplan¹¹ feels that it is possible to ligate the IVC above the RVS if the resulting venous pressure is lower than 30 cms of water. If the pressure is higher than that, or if renal excretion is affected, one can assume that the ligature is dangerous and it is necessary to bypass the obstruction. This is mandatory if an infrarenal ligation has also been performed or if the lower segment of the IVC is thrombosed.

Repair of a lateral laceration

Repair of a linear laceration is simple, but difficulties present themselves when there is loss of tissue. As suggested by Caplan, even a stenosed suture line is worthwhile.

Repair of a loss of tissue

Couinaud⁷ proposes a venous path but recognizes the risks of thrombosis. He mentions the experimental work of Dogue who repaired the IVC by suturing the small bowel to the edges of the laceration. The bowel serosa is covered by endothelium in a short period of time.

Axial translocation of the lower IVC

This theoretical possibility is mentioned by Couinaud⁷. The cava can be divided above the iliac veins, leaving a cross-communication of sufficient diameter between these two veins. It is mandatory to preserve the origin of the ilio-lumbar veins. Then the four lumbar and two renal veins can be sectioned and the resulting IVC tube constitutes an autologous venous graft of sufficient caliber. The upper end is anastomosed to the upper cut end of the cava. At the level of the renal veins openings can be made for implantation of those vessels.

End-to-side cava-portal anastomosis

Performed by Laurian with recovery.

Preserving the Renal Circulation

If a right nephrectomy has been performed, it is necessary to restore venous outflow from the left kidney. Several techniques available include right nephrectomy; reimplantation of the LRV; cavo-renalplasty; anastomosis of the LRV to the portal system; heterotopic autotransplantation of the left kidney to the iliac region; cephalad rotation of the distal IVC; and implantation of the renal veins into an axially translocated lower IVC.

Restoration of the Continuity of the IVC

Despite the routine use of prostheses to replace arterial segments, venous grafting remains too unreliable for routine clinical application.

Conclusion

The literature demonstrates that it is possible to interrupt the suprarenal IVC with recovery. This interruption can be achieved by ligation (single or multiple) or by section and suture of the stumps of the vein.

Under some circumstances, it is possible to repair the IVC and re-establish its continuity. However, if this is not possible, there are several effective surgical techniques designed to drain the renal veins, which is the major problem resulting from suprarenal interruption of the IVC. The renal veins, especially the LRV, can be transposed to the IVC stumps or to the portal system. Even the IVC itself can be anastomosed to the portal vein end-to-side as in Laurian's case. Based on experimental studies in dogs and in some clinical situations, it would seem that right nephrectomy, with or without heterotopic transplantation of that kidney, can preserve renal function in the remaining left kidney by diminishing the otherwise damaging high venous pressure. Using the caudal portion of the IVC as a graft can also prove effective. There are some experimental and a few clinical instances of restoration of the continuity of the IVC using prostheses. Few of these efforts have proved successful.

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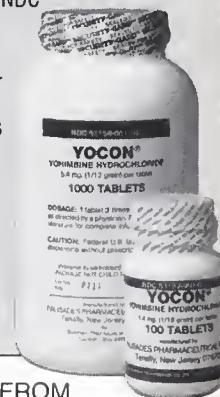
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April 30 - May 1, 9:00 a.m. - 3:00 p.m. and 9:00 a.m. - 12:00 noon. Presented by Dr. F. Charles Hiller. Sponsored by UAMS College of Medicine. Holiday Inn, North Little Rock. Fee: \$200. Six and three-quarters Category I credit hours.

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May 7, time to be announced. Sponsored by Baptist Medical Center. Little Rock Hilton Inn. For further information contact: BMC, (501) 227-2672.

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May 11, 7:00 a.m. Presented by Dr. Eric Westerman. Sponsored by AHEC Fort Smith. St. Edward Mercy Medical Center.

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May 11, 12:00 noon. Presented by Dr. Eric Westerman. Sponsored by AHEC Fort Smith. Seventh Floor Dining Room, Sparks Regional Medical Center.

Anemia Treatment

May 17, 12:00 noon. Presented by David Becton, M.D., Arkansas Children's Hospital. Sponsored by AHEC Fort Smith. Sparks Regional Medical Center, 7th Floor Dining Room.

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May 18, 12:30 p.m. Presented by Dr. Wendell Ross. Sponsored by AHEC Fort Smith. Medical Library, Sparks Regional Medical Center.

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May 18, 12:30 noon luncheon. Presented by Dr. A. E. Andrews. Sponsored by AHEC Southwest. St. Michael Hospital, 6th & Hazel, Texarkana.

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June 16, 6:30 p.m. Presented by Dr. Russell Steele. Sponsored by AHEC Southwest. Holiday Inn, I-30 & State Line, Texarkana. Two Category I credit hours.

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LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Alternating Sub-Specialty Conference, third Wednesday, 12:00 noon, Second Floor Classroom

General Pediatrics Seminar, first and third Friday, 12:00 noon, Second Floor Classroom

Genetics Conference, each Wednesday, 12:00 noon, Sturgis Building, Room 457

Infectious Disease Conference, second Wednesday, 12:00 noon, Sturgis Building, Room 121

Metabolic Neurology Conference, first Wednesday, 1:00 p.m., Physicians Lounge, 2nd Floor

Pediatric Grand Rounds, each Tuesday, 8:00 a.m., Sturgis Building, Auditorium

Pediatric Neuropsychiatry Conference, second Wednesday, 1:30 p.m., Second Floor Classroom

Pediatric Neuroscience Conference, first Thursday, 8:00 a.m., Second Floor Classroom

Pediatric Pathology Conference, first Wednesday, 12:00 noon, Second Floor Classroom

Pediatric Pharmacology Conference, fifth Wednesday when applicable, 12:00 noon, Second Floor Classroom

Pediatric Radiology Conference, first and third Thursday, 12:00 noon, Second Floor Classroom

Pediatric Research Conference, third Monday, 12:00 noon, Sturgis Building, Rooms S120-121

Problem Case Conference, second and fourth Friday, 12:00 noon, Second Floor Classroom

LITTLE ROCK-ST. VINCENT INFIRMARY

Cancer Conference, first Wednesday, 12:00 noon, CARTI Auditorium

Cancer Conference, third and fourth Thursday, 12:00 noon, Room S1174K, Lab

General Medicine Journal Club, each Tuesday, 12:00 noon, Medical Affairs Conference Room

Hematology-Oncology Conference, second Thursday, 12:00 noon, Laboratory Library

Interhospital Urology Grand Rounds, first Tuesday, 5:30 p.m., Maumelle Room

Neuropathology Conference, third Tuesday, 5:00 p.m., Room S1174K, Laboratory

Pediatric Conference, first Tuesday, 12:30 p.m., Maumelle Room

Peripheral Vascular Disease Conference, fourth Tuesday, 6:00 p.m., Maumelle Room
Pulmonary Conference, second and fourth Wednesday, 12:00 noon, DeSoto Room

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, third Thursday, 7:00 a.m., Conference Room 1
Grand Rounds Conference, each Wednesday, 12:00 noon, Conference Room I. Lectures and case presentations
Pathology Conference, third Tuesday, 3:00 p.m., Pathology Library
Pulmonary Conference, each Tuesday, 12:00 noon, Shuffield Auditorium
Surgery Conference, each Thursday, 7:30 a.m., Shuffield Auditorium

As an organization accredited by the Accreditation Council for Continuing Medical Education, the University of Arkansas for Medical Sciences certifies the following continuing medical education activities meet the criteria for Category I of the Physician's Recognition Award of the American Medical Association.

UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES - LITTLE ROCK

ACRC/CARTI Tumor Conference, each Wednesday, 12:00 noon, CARTI, Markham & University
ACRC Oncology Forum, fourth Thursday, 4:00 p.m., UAMS Education Building, Room G137
Anesthesia Conference Series, times and dates vary, UAMS Education Building, Room G/110 A&B
Anesthesia Morbidity and Mortality Conference, every second and fourth Tuesday, 6:45 a.m., UAMS Education Building, Room G/110 A&B. Every first, second and third Thursday, 4:00 p.m., Room G/112 A&B.
Child Psychiatry Clinical Case Conference, first Friday, 1:00 p.m., UAMS Child Study Center Conference Room.
Interdisciplinary Gynecologic Cancer Conference, each Friday, 12:30 p.m., UAMS Education Building, Room G106 A&B
Medicine Grand Rounds, each Thursday, 12:15 p.m., UAMS Shorey Auditorium
Medicine Research Conference, each Wednesday, 4:30 p.m. Shorey Building, Room 3506
Neurology Clinical Case Conference, three or four Thursdays per month, 8:00 a.m. Rotates between UAMS (7D33) and LRVAMC (3S) and ACH.
Neuropathology Conference, every Tuesday, 4:00 p.m. Rotates between UAMS (7D33) and LRVAMC (Autopsy Room).
Neuroscience Conference (Basic), second, third, and fourth Monday, 8:00 a.m., UAMS 7D33.
Ob/Gyn Grand Rounds, each Wednesday, 7:30 a.m., UAMS Education Building, Room G/131B
Ophthalmology Problem Case Conference, each Thursday, 4:00 p.m., UAMS AAC Eye Clinic, Room 3/150.
Orthopaedic Basic Science Conference, occasional Tuesdays, 11:00 a.m., UAMS Education Bldg., Room B/135.
Orthopaedic Bibliography Conference, each Tuesday, 8:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Fracture Conference, each Tuesday, 7:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Grand Rounds, each Tuesday, 10:00 a.m., UAMS Education Building, Room B/135
Psychiatry Grand Rounds/Clinical Case Conference, each Friday, 11:00 a.m., UAMS Shorey Auditorium
St. Vincent Urology Grand Rounds, first Tuesday, 5:30 p.m., St. Vincent Infirmary, Education Building, Room 159
Surgery Grand Rounds, each Monday, 5:00 p.m., UAMS Education Building, Room G/141A
Surgery Morbidity and Mortality Conference, each Wednesday, 5:00 p.m., UAMS Education Building, Room G/141A.
Surgery Review Conference, each Monday, 6:00 p.m., UAMS Education Building, Room G/141A
Urologic Topics (Resident Presentation), once or twice monthly, 5:00 p.m., UAMS
Urology Grand Rounds, twice monthly, 5:00 p.m., VAMC
Urology Morbidity and Mortality Conference, last Wednesday, 5:00 p.m., UAMS
Uro-Radiology Workshop (Urologic Imaging), first Thursday, 5:00 p.m., UAMS
VA Diagnostic Imaging Conference, every Tuesday, Wednesday and Thursday, 8:00 a.m., LRVA Nuclear Medicine Conference Room, Room 1D173
VA Medical Service Teaching Conference, each Thursday, 8:00 a.m., NLRVA, Building 66, Room 38
VA Physical Medicine and Rehab Grand Rounds, fourth Friday, 11:00 a.m., NLRVA Building 89, Conference Room, or Arkansas Rehab Institute
VA Surgery Grand Rounds, each Thursday, 12:45 p.m., VAMC, Room 2D109
VA Surgery Service General Chest Topics (Combined Surgery/Medicine Lung Conference), every other Monday, 12:15 p.m., LRVA, Room 2D109.
VA Surgery Service Lung Cancer Conference, every Tuesday, 3:00 p.m., LRVA, Room 2E142.
VA Topics in Rehabilitation Medicine, each Thursday, 7:45 a.m., NLRVA Conference Room, Building 89L
VA Weekly Tumor Conference, each Tuesday, 1:00 p.m., VAMC, Room 2D109

AHEC - EL DORADO

Behavioral Sciences Conference, first and fourth Friday, 12:15 p.m., AHEC - South Arkansas.
Chest Conference, third Wednesday, 12:30 p.m., Warner Brown Hospital
Fracture Conference, third Tuesday, 12:15 p.m., AHEC-South Arkansas
Gynecology-Pathology Conference, second Friday, 12:15 p.m., AHEC-South Arkansas
Internal Medicine Conference, first, second and fourth Wednesday, 12:15 p.m., AHEC-South Arkansas
Pathology Conference, second Tuesday, 12:15 p.m., AHEC-South Arkansas
Pediatric Conference, third Friday, 12:15 p.m., Union Medical Center.
Obstetrics-Gynecology Conference, fourth Thursday, 12:15 p.m., AHEC-South Arkansas
Surgical Conference, first, second and third Monday, 12:15 p.m., AHEC-South Arkansas
Tumor Clinic, fourth Tuesday, 12:15 p.m., AHEC-South Arkansas

AHEC NORTHWEST - FAYETTEVILLE

City Hospital Staff Meeting, second Friday, 12:00 noon, Fayetteville City Hospital
Medicine Teaching Conference, first, third and fifth Thursday, 1:00 p.m., AHEC - NW, 241 W. Spring, Fayetteville
Nephrology Lecture Series, fourth Thursday, 12:30 p.m., AHEC- NW, 241 W. Spring, Fayetteville
Rheumatology Lecture Series, first Tuesday, 12:30 p.m., VA Medical Center
St. Mary's Saturday Morning Problem Conference, each Saturday, 8:30 a.m., St. Mary's Rogers Hospital, Rogers, AR.

AHEC - FORT SMITH

Neurology Conference, second Thursday, 12:30 p.m., Sparks Regional Medical Center, Medical Library

AHEC NORTHEAST - JONESBORO

AHEC Lecture Series, first and third Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Annex Building
Arkansas Methodist Hospital CME Conference, last Friday, 7:00 a.m., Arkansas Methodist Hospital, Paragould
Cherokee Village Tumor Conference, third Monday, every four months, 6:00 p.m., Ozark Baptist Memorial Hospital, Cherokee Village.
Chest Conference, fourth Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room
Independence County Medical Society, second Tuesday, 7:30 p.m., White River Medical Center, Batesville
Interesting Case Conference, second and fifth Tuesday, when applicable, 12:00 noon, St. Bernard's Dietary Conference Room
Kennett Tumor Conference, second Tuesday (every other month), 12:00 noon, Twin Rivers Regional Medical Center, Kennett, MO
Methodist Hospital of Jonesboro CME Staff Conference, second Tuesday, 7:30 p.m., Cafeteria, Methodist Hospital of Jonesboro
Monthly Medical Lecture Series, third Tuesday, 7:30 p.m., rotates each month between Walnut Ridge and Pocahontas
Neurological-Neurosurgical Conference, first Monday, 12:00 noon, St. Bernard's Dietary Conference Room
Neuroradiology Conference, second Friday, 12:00 noon, St. Bernard's Dietary Conference Room
Newport Tumor Conference, second Wednesday, 12:00 noon, rotates each month between Harris Clinic and Newport Hospital
Perinatal Conference, second Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Piggott Tumor Conference, third Wednesday, 12:00 noon, Piggott Hospital, every four months.
Poplar Bluff Tumor Conference, third Wednesday, 12:00 noon, Lucy Lee Hospital, Poplar Bluff.
Tumor Conference, fourth Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Wynne Tumor Conference, third Monday, 6:00 p.m., Grecian Steak House, Wynne, every four months.

AHEC - PINE BLUFF

Behavioral Science Conference, each Thursday, 12:30 p.m., Jefferson Regional Medical Center
Chest Conference, second and fourth Friday, 12:30 p.m., Jefferson Regional Medical Center
Family Practice Conference, fourth Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Internal Medicine Conference, second and fourth Wednesday, 12:30 p.m., Jefferson Regional Medical Center
Obstetrics/Gynecology Conference, second Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Pediatric Conference, third Wednesday, 12:30 p.m., Jefferson Regional Medical Center
Radiology Conference, third Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Southcast Arkansas Medical Lecture Series, third Tuesday, 6:30 p.m., Rosswood County Club. Dinner meeting.
Sub-Specialty Conference, first Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Surgery Conference, first Wednesday, 12:30 p.m., Jefferson Regional Medical Center

AHEC - TEXARKANA

Cardiology Conference, alternating Fridays, 11:30 p.m., St. Michael Hospital
Chest Conference, third Wednesday, 12:30 p.m., St. Michael Hospital
Cine Radiology Conference, fourth Friday, 12:00 noon luncheon, Wadley Regional Medical Center
ECHO Cardiology Conference, fourth Friday, 12:00 noon luncheon, Wadley Regional Medical Center
Neuro-Radiology Conference, second and fourth Wednesday, 7:00 a.m. breakfast, Wadley Regional Medical Center
Surgeons and Pathologists Conference, fourth Thursday, 7:00 a.m. breakfast, Wadley Regional Medical Center
Tumor Conference, first Wednesday, 7:00 a.m., St. Michael Hospital

MEDICINE IN THE NEWS

Children's Almanac Available

Arkansas Advocates for Children and Families has prepared *A Childrens Almanac* for placement in patient waiting rooms. It contains interesting and useful reading for parents and other persons involved with children and youth. Among the topics covered are: preparing a child for a sibling, explaining death to a youngster, what to look for when selecting a day care center, tips on preventing accidents, immunization schedules, and data on communicable diseases.

The information contained in the book was supplied by experts and the sources are listed therein. The handbook

also contains emergency and crisis phone numbers of the county units of the Department of Health and of the Department of Human Services, and the location and phone numbers of some of the other agencies and organizations that offer children's services referred to in the *Almanac*. The *Almanac* is free with the exception of postage and handling. For more information, call the Arkansas Advocates for Children and Families at 371-9678.

Physicians Must Certify Abortion Cause

Physicians who perform abortions on CHAMPUS patients will now have to certify in writing that the abortion

was induced because the patient's life would have been endangered if the fetus had been carried to term.

The certification from the attending physician is required before the CHAMPUS claims processors will share the cost of medical services and supplies related to the abortion. In the certification, the physician must specify the life-threatening condition that makes the abortion necessary. The conditions which may be covered include: certain malignancies, such as leukemia and breast cancer; kidney failure; congestive heart failure; severe heart disease; uncontrolled diabetes; and several others.

CHAMPUS is prohibited by law from paying for abortions except where the life of the mother would be endangered if the pregnancy were continued.

For more details about CHAMPUS coverage of abortions, contact the nearest Health Benefits Advisor, or the CHAMPUS claims processor for your state.

AMA Offers New Member Benefit Packages for 1988

To enhance the value of AMA membership, the American Medical Association will offer members an opportunity to select one of three new benefit packages in 1988. Members will have the opportunity to select **one and only one** of these three new packages when they receive their 1988 Membership Kit.

Members should watch their mail for the 1988 AMA Membership Kit, which includes a membership certificate suitable for framing, a wallet-sized membership card, and a flyer describing the complete array of products and services to which members are entitled. In addition, the 1988 kit includes a postage-paid business reply card which members

should use to select one and only one of three new benefit packages of comparable worth and return the card to the AMA. Members who return their completed card to the AMA will receive their special benefit package as it becomes available.

The new benefit packages are the first of a series of steps in a major new AMA program which addresses the differing membership needs of the various segments of the medical profession. This program, which will become fully operational by the end of 1988, was developed with the MAC Group, a Cambridge, MA-based consulting firm specializing in marketing strategy. The program classified members into one of three market segments. One segment primarily seeks broad representation from the AMA. A second segment looks to the AMA first and foremost for economic representation. A third segment has a principal interest in receiving medical education and information from the Association. The new benefit packages, which members will be given an opportunity to choose via their 1988 Membership Kit, will allow AMA members to choose from three "product lines" which correspond to the three major benefit types for the first time. As a result, members will have the opportunity to self-select a tailored membership benefit package which corresponds to the market segment which most closely meet their needs.

According to James H. Sammons, M.D., "There have always been very compelling reasons for physicians and medical students to support the AMA through membership. The three new tailored benefit packages constitute yet another good reason to join. They are first steps in a continuing AMA effort to be even more aware of what members want and, more importantly, to give it to them."

NEWSMAKERS

From the AMS AIDS Committee...Dr. William N. Jones, chairman of the committee, recently spoke to the Arkansas Association for Society Executives.

Dr. Linda A. Markland, a Fayetteville family practitioner, spoke to the Sebastian County Medical Society and has arranged an AIDS information program for northwest Arkansas high school honor students.

A large audience was addressed at the Episcopal Conference on AIDS. The group of 400 heard **Dr. Harold Hedges**, a Little Rock physician, speak about how AIDS is affecting their lives.

AIDS information was presented to 35 members of the Network for Executive Women by **Dr. Forrest B. Miller, Jr.**, a Little Rock family practitioner. Dr. Miller also spoke recently to the Cleburn County Medical Society.

Dr. John D. Ashley, Jr., spoke to Southern Baptist College students on the AIDS situation and what issues

effect them. A Newport internist, **Dr. Ashley** wrote a series of articles on AIDS which were published in the *Newport Daily Independent*.

The Tenth District will soon be adding a third councilor when **Dr. Gerald A. Stolz, Jr.**, a Russellville pathologist, takes office May 1st. Dr. Stolz was elected during the recent AMS Annual Session and House of Delegates meeting in Little Rock. The district passed the 300 member mark which, according to the Constitution and Bylaws of the Arkansas Medical Society, allows them to receive another councilor.

Dr. David Staggs, an internist from Fort Smith, was recently named 1988 chief of medical staff at Sparks Regional Medical Center. Dr. Staggs is affiliated with Dr. Steven Edmondson and Dr. Stephen Parker.

New officers of the Jefferson County Medical Society are **David Jacks, M.D.**, president; **Charles Mabry, M.D.**, vice president, and **Vangie Atkinson, M.D.**, secretary. All three physicians practice in Pine Bluff where Dr. Atkinson is an anesthesiologist and Dr. Jacks is a urologist. Dr. Mabry's speciality is general surgery.

The new assistant chief of medical affairs at Baptist Medical Center is **C. E. Ballard, M.D.**, a Little Rock family practitioner. Dr. Ballard has been with the hospital since 1972 and was chairman of the hospital's Family Practice Section in 1983-84.

Dr. Stephen P. Schoettle, of West Memphis, was recently elected the president of the Crittenden County Medical Society. Other officers are **Dr. Jacinto Hernandez**, vice president; **Dr. Tom Gray**, secretary; and **Dr. Scott Ferguson**, treasurer.

Springdale Memorial Hospital announced the election of **James A. S. Haisten, M.D.**, to chief of staff for 1988. Dr. Haisten is a cardiologist in Springdale.

Sister Mary Werner, chief executive officer of St. Joseph's Regional Health Center in Hot Springs, announced the election of two AMS members to the staff. **Phillip Smith, M.D.**, a radiologist, was named chief of staff elect and **Martin Koehn, M.D.**, was elected medical staff secretary. Dr. Koehn is a family practitioner.

The American Academy of Orthopaedic Surgeons recently inducted three Society members as Fellows. **Thomas E. Knox, M.D.**, Mountain Home; **John F. Ball, M.D.**, Jonesboro; and **Robert A. Porter, M.D.**, Little Rock; were all inducted during the association's annual meeting.

Ted E. Ashcraft, M.D., of the Ashcraft-Monfee Clinic based in Russellville, has passed the certification examination of the American Medical Society of Alcoholism and Other Drug Dependencies (AMSAODD) and is recognized by that Society as knowledgeable and expert in chemical dependence. The six-hour examination includes both clinical issue and basic science questions about alcohol and all drugs of abuse.

NEW MEMBERS

BAXTER COUNTY MEDICAL SOCIETY

Haller, Nancy T., Family Practice, Mountain Home. Born March 5, 1948; Laxou, France. Pre-medical education, University of Arkansas, Fayetteville, B.A., 1970. Medical education, University of Arkansas for Medical Sciences, 1974. Internship, Methodist Hospital, Dallas, TX. Military record, National Health Service Corps, 3 years. Practice experience, Jasper, AR, 3 years; Mountain Home, 8 years. Board certified.

DREW COUNTY MEDICAL SOCIETY

Oxner, Troy W., General Practice, Monticello. Born October 24, 1950; Holly Grove, AR. Pre-medical education, University of Arkansas at Monticello and University of Arkansas School of Pharmacy, B.S., 1974. Medical education, Oklahoma College of Osteopathic Medicine and Surgery, Oklahoma City, 1986. Internship, Tucson General Hospital, Tucson, AZ.

GARLAND COUNTY MEDICAL SOCIETY

Arthur, James M., Neurosurgery, Hot Springs. Born January 26, 1949, Little Rock. Pre-medical education, University of Arkansas, Fayetteville, B.A., 1971. Medical education, University of Arkansas for Medical Sciences, 1975. Internship/Residency, University Hospital (UAMS Program), Little Rock. Practice experience, 7 years, Hot Springs. Board certified, Neurological Surgery.

MILLER COUNTY MEDICAL SOCIETY

Chipman, Dennis C., Psychiatry, Texarkana. Born January 7, 1934, Seattle, WA. Pre-medical education, University of Washington, 1955. Medical education, University of Washington, 1959. Internship, University of Nebraska Hospital System. Residency, University of Washington Hospital System. Practice experience, 3 years, Seattle; 15 years, Kingsport, TN; 2 years, Hickory, NC; 2 years, Texarkana. Board certified, Psychiatry.

Contreras, Freddie L., Neurosurgery, Texarkana. Born September 17, 1955, Wameco, KS. Pre-medical education, Oklahoma City University, B.S., 1977. Medical education, University of Oklahoma Medical School, 1981. Internship, University of Texas Medical Branch (John Sealy Hospital), Galveston. Teaching appointments, Assistant Instructor, one year. Board eligible.

Wilson, Thomas L., Obstetrics and Gynecology, Texarkana. Born July 31, 1956, Tulsa, OK. Pre-medical education, University of Oklahoma. Medical education, University of Oklahoma, 1982. Internship, Tulsa Medical College. Residency, Parkland Memorial Hospital.

MISSISSIPPI COUNTY MEDICAL SOCIETY

Abraham, Anes Mae W., Pediatrics, Blytheville. Born April 18, 1951, Blytheville. Pre-medical education, Arkansas Polytechnic College, 1972. Medical education, University of Arkansas for Medical Sciences, 1977. Internship,

LeBonheur Children's Hospital. Residency, Wilford Hall Medical Center. Military record, U.S.A.F., 4 years. Practice experience, 4 years. Board certified, Pediatrics.

OUACHITA COUNTY MEDICAL SOCIETY

Posey, David L., General Surgery, Camden. Born July 10, 1954, Crossett. Pre-medical education, Arkansas State University, B.S., 1975. Medical education, University of Arkansas for Medical Sciences, 1979. Internship, Jackson, TN. Residency, Charity Hospital, New Orleans, LA. Practice experience, 3 years, Camden. Board certified, Surgery. Diplomate, American College of Surgeons.

POPE COUNTY MEDICAL SOCIETY

Barron, William G., Family Practice, Russellville. Born March 8, 1952, Little Rock. Pre-medical education, University of Arkansas, Fayetteville, B.A., 1974. Medical education, University of Arkansas for Medical Sciences, 1978. Internship, UAMS. Residency, UAMS (AHEC Fort Smith). Practice experience, 6 years, Russellville. Teaching appointments, Assistant Director, Fort Smith, AHEC. Board certified, Family Practice. Member, American Academy of Family Practice.

Hendren, Michael C., Family Practice, Russellville. Born January 6, 1948, San Francisco, CA. Pre-medical education, University of Arkansas, B.S., 1971. Medical education, University of Arkansas for Medical Sciences, 1976. Internship, UAMS. Residency, UAMS (AHEC Fort Smith). Board eligible.

PULASKI COUNTY MEDICAL SOCIETY

Chang, Chimin J., Obstetrics and Gynecology, Jacksonville. Born July 22, 1955, Taiwan. Pre-medical education, Hendrix College, Conway, B.A., 1977. Medical education, University of Arkansas for Medical Sciences, 1981. Internship/Residency, UAMS. Board eligible.

Glenn, Robert E., Pediatrics, Little Rock. Born October 24, 1936, Memphis, TN. Pre-medical education, Arkansas A & M, Monticello, B.S., 1961. Medical education, University of Arkansas for Medical Sciences, 1965. Internship/Residency, UAMS. Practice experience, 18 years, North Little Rock and Little Rock. Board certified, Pediatrics.

Henry, Robert A., Internal Medicine, Little Rock. Born October 3, 1956, Little Rock. Pre-medical education, University of Arkansas at Little Rock, B.S., B.A., 1980. Medical education, University of Arkansas for Medical Sciences, 1984. Internship/Residency, University of Kentucky and V. A. Medical Center, Lexington.

Hutchins, Steven W., Cardiology, Little Rock. Born October 3, 1952, Holland, MI. Pre-medical education, University of Arkansas at Little Rock, B.S., 1974. Medical education, University of Arkansas for Medical Sciences, 1978. Internship/Residency, UAMS. Practice experience, University of Arkansas Medical Center and V. A. Hospital, 3 years. Board certified, Cardiology.

Johnson, Dianne F., Pathology, Little Rock. Born May 2, 1952, Hope, AR. Pre-medical education, University of Arkansas, Fayetteville, and University of Arkansas School of Health Related Professions, B.S. Medical education, University of Arkansas for Medical Sciences, 1982. Internship/Residency, UAMS. Practice experience, John L. McClellan V. A. Hospital, 1 year; Pathology Laboratories of Arkansas, 1 year. Board certified, Pathology.

Kennedy, Eleanor E., Internal Medicine and Cardiovascular Disease, Little Rock. Born June 16, 1953, Pensacola, FL. Pre-medical education, Emory College, Atlanta, GA, B.A., 1974. Medical education, Emory University School of Medicine, 1979. Internship/Residency, Boston City Hospital and Yale University. Practice experience, 3 years, Little Rock. Board certified, Internal Medicine, Cardiovascular Disease.

Romanace, John P., Physical Medicine and Rehabilitation, Little Rock. Born September 14, 1936, Angers, France. Medical education, Faculte De Reims, Reims, France, 1970. Internship/Residency, Berkshire Medical Center, Pittsfield, MA; Albert Einstein Medical Center, New York NY; Cornell Medical Center, New York, NY; and V. A. Medical Center, Boston, MA. Practice experience, 2 years, Birmingham, AL; 4 years, Schenectady, NY; 4 years, Quincy, IL; and 1 year, Fort Smith. Board certified, Physical Medicine and Rehabilitation.

Sain, Mary K., Internal and Adolescent Medicine, Little Rock. Born September 11, 1950, Dermott, AR. Pre-medical education, University of Arkansas, Fayetteville, B.S., M.D., 1979. Medical education, St. Georges University, Bay Shore, NY, 1983. Internship/residency, Albany Medical Center, Albany, NY. Board certified, Internal Medicine. Board eligible, Pediatrics.

Stanford, Royce A., Pediatrics, Little Rock. Born October 9, 1955, West Germany. Pre-medical education, Harding University, Searcy, B.S., 1977. Medical education, University of Arkansas for Medical Sciences, 1981. Internship, UAMS. Residency, University of Virginia, Charlottesville. Practice experience, 2 years, Fort Smith; 1 year, Benton. Board eligible, Pediatrics.

Stefans, Vikki A., Physical Medicine and Rehabilitation, Little Rock. Born September 29, 1957, Pittsburgh, PA. Pre-medical education, Pennsylvania State University, University Park, PA, B.S., 1977. Medical education, Thomas Jefferson Medical College, Philadelphia, 1979. Internship, Rehabilitation Institute of Chicago (Northwestern University). Residency, Columbus Hospital, Chicago. Board certified, Pediatrics, and Physical Medicine and Rehabilitation.

Wingfield, Dennis L., Ophthalmology, Little Rock. Born March 11, 1950, Prescott, AR. Pre-medical education, Hendrix College, B.A., 1972. Medical education, University of Arkansas for Medical Sciences, 1976. Internship/Residency, UAMS. Board eligible. Member, Arkansas Ophthalmological Society, American Academy of Ophthalmology, Alpha Omega Alpha.

NEVADA COUNTY MEDICAL SOCIETY

Vermont, Charles A., General Practice, Prescott. Born December 22, 1945, New York, NY. Pre-medical education, Johns Hopkins University, B.A. 1967; B.S., 1978. Medical education, University of Arkansas for Medical Sciences, 1986. Internship, UAMS.

SEBASTIAN COUNTY MEDICAL SOCIETY

Beachy, Allen L., Family Practice, Fort Smith. Born January 9, 1958, Milford, DE. Pre-medical education, Southern Nazarene University, Bethany, OK, B.S., 1980. Medical education, University of Oklahoma College of Medicine, Oklahoma City, 1984. Internship, UAMS (AHEC Fort Smith). Practice experience, 1 year. Board eligible.

Gwartney, Michael P., Otolaryngology, Fort Smith. Born December 1, 1955, Tulsa, OK. Pre-medical education, University of Tulsa, B.S., 1978. Medical education, University of Oklahoma College of Medicine, 1982. Internship/Residency, University of Mississippi, Columbia. Board certified, Otolaryngology. Member, American Academy of Otolaryngology, American Academy of Facial, Plastic and Reconstructive Surgery.

WASHINGTON COUNTY MEDICAL SOCIETY

Nowlin, William B., General Surgery, Fayetteville. Born January 1, 1955, Frederick, OK. Pre-medical education, Northeastern State University, Tahlequah, OK, B.S., 1977. Medical education, University of Oklahoma College of Medicine, 1981. Internship, Oklahoma Health Science Center, Tulsa. Residency, OUHSC-Tulsa; Baptist Medical

Centers, Birmingham, AL; Fellowship Colon and Rectal Surgery, Louisiana State University Medical Center, Shreveport. Board certified, Surgery.

Rhodes, David F., Diagnostic Radiology, Springdale. Born November 23, 1955, Dallas. Pre-medical education, University of Texas, Austin, B.A., 1979. Medical education, University of Texas Medical Branch, Galveston, 1983. Residency, University of Arkansas for Medical Sciences. Board certified, Radiology. Member, ACR.

Weed, Catherine A., Emergency Medicine, Springdale. Born January 27, 1956, Fort Smith. Pre-medical education, University of Arkansas, Fayetteville, B.S., 1977. Medical education, University of Arkansas for Medical Sciences, 1981. Internship, UAMS. Residency, University of Kentucky, Lexington. Practice experience, 3 years, Durham, NC; 1 year, Springdale/Fayetteville. Board certified, Emergency Medicine.

Weed, Jr., Wendell W., Dermatology, Fayetteville. Born November 19, 1955, Memphis, TN. Pre-medical education, University of Arkansas, Fayetteville, B.A., 1978. Medical education, University of Arkansas for Medical Sciences, 1982. Internship/Residencies, University of Kentucky, Lexington; Duke University. Board eligible. Member, American Academy of Dermatology.

MEDICAL STUDENT SECTION

Saunders, Mark W. Born December 3, 1960, Fort Smith. Pre-medical education, University of Arkansas, B.A., 1983.

Turner, Sammy L. Born October 22, 1964, Gravett, AR. Pre-medical education, University of Arkansas, Fayetteville, B.A., 1987.

IN MEMORIAM

DR. JOHN CAMPBELL GILLILAND, JR.

John Campbell Gilliland, Jr., M.D., a pediatric cardiologist with the Holt-Krock Clinic, died Saturday, March 12, 1988. He was 55.

Dr. Gilliland was the founder of the Fort Smith Area Health Association and a former president of the Arkansas Heart Association. He had been with the Holt-Krock Clinic since 1973.

He was a member of the American Medical Association, Sebastian County Medical Society and a Fellow of the American Academy of Pediatrics. He was also a member of the Arkansas Medical Society, and a Fellow of the American College of Cardiology.

Survivors include his wife, Carole Hart Gilliland; four sons, Dabney Parrish and Joseph Clayton Gilliland of Little Rock, Lee Barnett of Kansas City, and John Campbell Gilliland III of Fort Smith; a daughter, Joan Chandler McKin-

ney of Spiro, OK; a brother, Pat Gilliland of Jackson, MS; and two grandchildren.

DR. JOSEPH WILLIAM WILSON

Joseph William "Joe Bill" Wilson, M.D., of Harrison, died Tuesday, March 22, 1988. He was 54.

Dr. Wilson began practice in 1960. He was a fellow of the American Academy of General Practitioners, and a member of the Arkansas Academy of Family Practitioners. He was a member of the Boone County and Arkansas Medical Societies.

Dr. Wilson is survived by his wife, Norma Ann Smith Wilson; three sons, Jody Wilson of Little Rock and Fred Wilson and John Wilson, of Harrison; two daughters, Mrs. Debbie Patterson of Springfield, MO, and Miss Elizabeth Wilson of Harrison; his mother, Mrs. Mary Bell Wilson and a brother, Robert F. Wilson, and three grandchildren.



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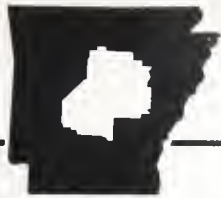
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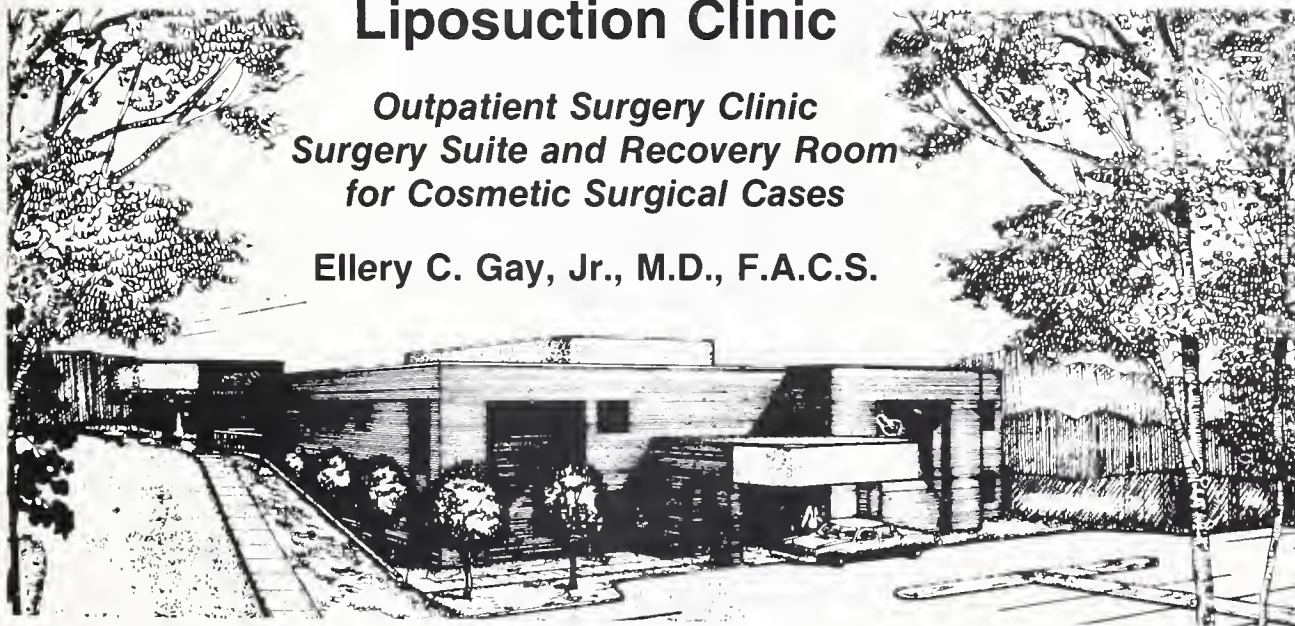
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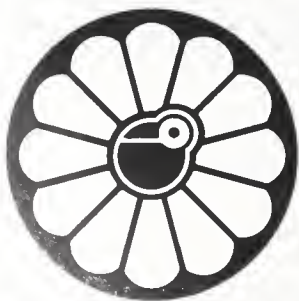
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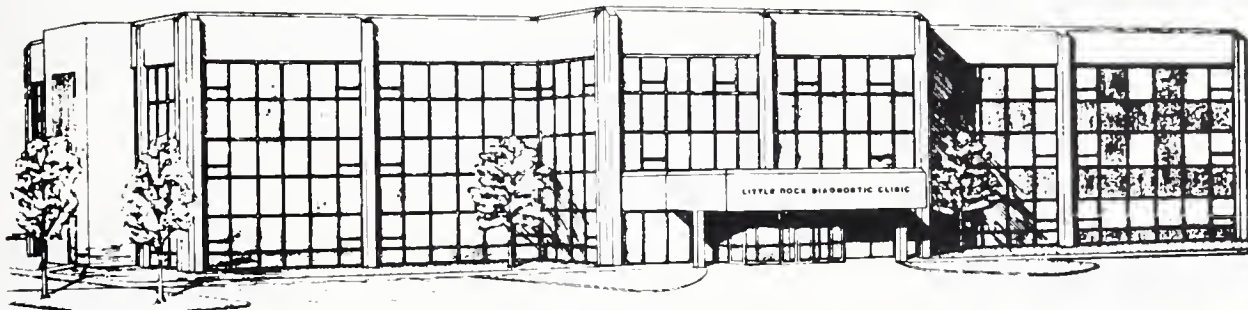
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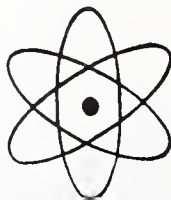
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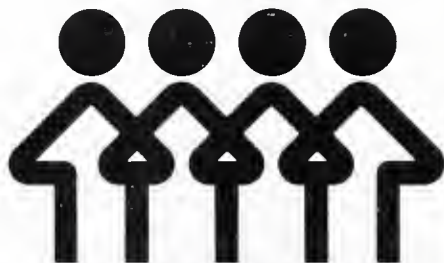
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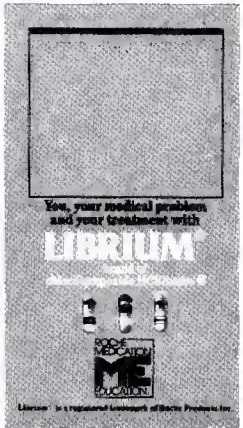
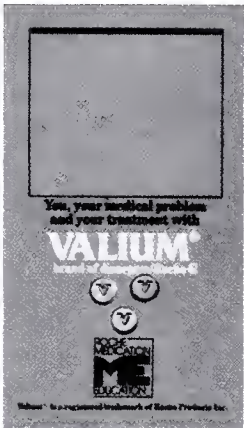
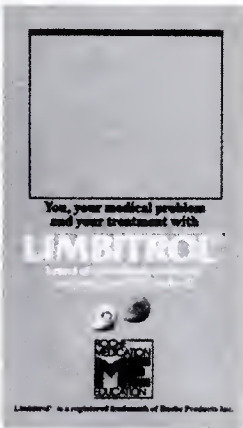
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Volume 84 Number 12

May, 1988



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**JOURNAL OF THE ARKANSAS MEDICAL SOCIETY
INDEX OF ARTICLES 1987 - 1988
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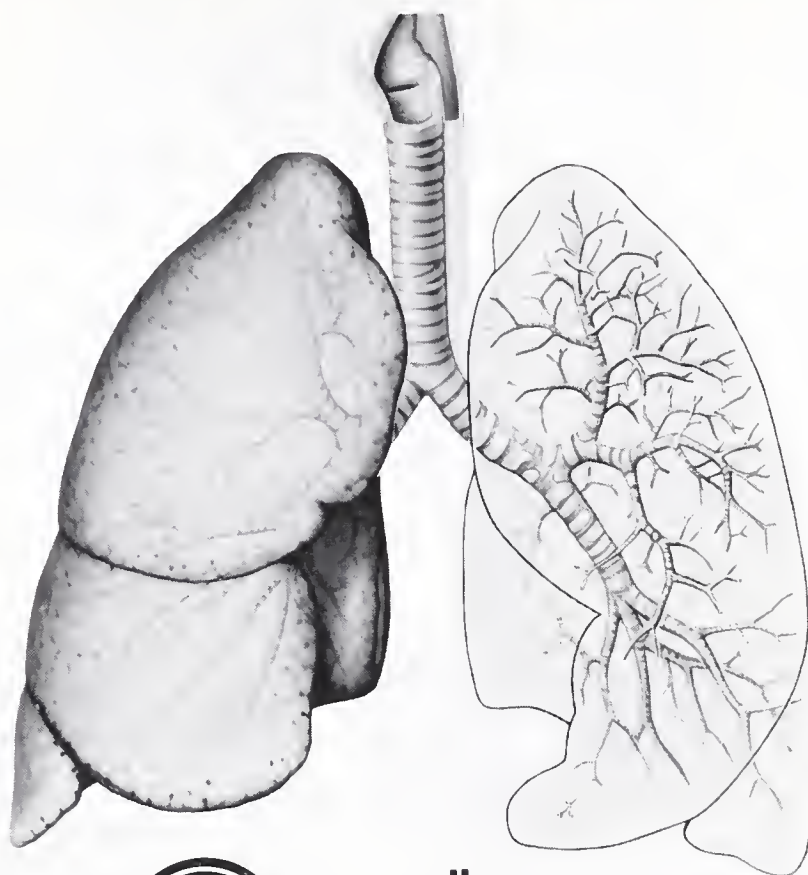
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Precautions:

- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

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- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever): 1.5%; usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
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- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%; and, rarely, thrombocytopenia.

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*On Our Cover: "Falling Waters", Ozark National Forest. Photo
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AIDS IN ARKANSAS 1988

January 1 - April 11, 1988

Total number of cases reported	32	CASES BY AGE GROUP	
Number of deaths	11	Less than 20	0
		20 - 29	12
		30 - 39	13
		40 - 49	3
		50 - 59	0
		60 or more	4
CASES BY SEX			
Male	28		
Female	4		
CASES BY RACE		OPPORTUNISTIC DISEASE	
White	22	Pneumocystic Carinii	16
Black	10	Kaposi's Sarcoma	2
		Pneumocystis Carinii and Kaposi's Sarcoma	0
		Other	14
CASES BY RISK GROUP			
Homosexual/Bisexual*	22		
IV Drug User	2		
Hemophiliac	0		
Transfusion	4		
Heterosexual	1		
NIR#	3		

* Out of the 22 homosexual/bisexuals, three are/were IV drug users

No identified risk group (NIR)

AIDS IN ARKANSAS 1985 - 1988

Total number of cases reported	122	CASES BY AGE GROUP	
Number of deaths	66	Less than 20	0
		20 - 29	43
		30 - 39	51
		40 - 49	19
		50 - 59	3
		60 or more	6
CASES BY SEX			
Male	113		
Female	9		
CASES BY RACE		OPPORTUNISTIC DISEASE	
White	95	Pneumocystic Carinii	61
Black	27	Kaposi's Sarcoma	6
		Pneumocystis Carinii and Kaposi's Sarcoma	3
		Other	52
CASES BY RISK GROUP			
Homosexual/Bisexual*	93		
IV Drug User	14		
Hemophiliac	0		
Transfusion	5		
Heterosexual**	4		
NIR#	6		

* Out of the 93 homosexual/bisexuals, 19 are/were IV drug users

** The three heterosexual cases represent two female contacts to IV drug users and the six NIR [No identified risk group] represent two (2) male contacts to prostitutes.

No identified risk group (NIR)

EDITORIAL

Robert Glenn, M.D.



First, I have to let you know what an honor it is to have been selected as the pediatrics representative on our Journal's editorial board. It is a tribute to Dr. Kahn and the wonderful job he has done through the years to know that it takes six of us to replace him.

I have many colleagues, representing different areas in pediatrics, whom I will be calling on to contribute some of the editorials in the future. However, the responsibility for the first must be mine.

Pondering various topics appropriate to a first editorial makes one reflect on the specialty of pediatrics and how it has changed throughout the years. As most of you know, our specialty was begun by a group of very dedicated physicians who could not accept the fact that hundreds of babies were dying daily with infections, especially diarrheal disease. This led to the development of formulas that would naturally and safely allow infants to grow optimally. This early emphasis on young infants led to the term "baby doctor", a moniker which has persisted and is abhorred by many of us today.

Oh, how things have changed! Today one can look at the amazing variety of challenges in pediatrics and see how some of the most advanced phases of medicine cut across these areas, and have been accomplished by many of today's modern pediatricians. In Endocrinology and Genetics the use of recombinant DNA has given us growth hormone and human insulin. In Immunology, Cardiology, Gastroenterology and Nephrology we see the amazing accomplishments that have taken place in transplantations. Advances in Hematology/Oncology have resulted in numbers of leukemia cures thought to be impossible in the past. Neonatology has contributed to the continuing decrease in the neonatal death rate and in the increasing number of premature babies surviving to lead normal lives. Increased emphasis on technology has resulted in the saving of lives and Emergency Medicine, transport and Critical Care Medicine.

When one looks at our present society and many of the problems that have ensued it is easy to ascribe many of the so called "new diseases" to these changes. These so-called new diseases are affecting mostly the young population. Single families, behavior disorders, school

failure, physical and sexual abuse, drug abuse, sexually transmitted disease, teenage pregnancy and eating disorders are some of the problem areas currently with us. Yes, there is much for today's pediatrician to do besides mix formulas.

There are factors, both external and internal, inhibiting effective growth and action in solving problems in the above mentioned areas. The first factor is within the specialty itself. Most people would agree that those who specialize in pediatrics are "nice guys or gals." (Therein lies the problem.) When people gather around the table to make decisions, nice guys are often considered weak guys. That is why many pediatric departments throughout the country end up being the least respected departments of the medical school, at the bottom of the financial ladder and unable to recruit the most desirable young people into the specialty. Fortunately that is not true in Arkansas where our recruits are consistently from the upper one-half of the graduating class. This internal factor has affected pediatricians monetarily as well because if one looks at third party pay, (private, governmental or other), pediatricians are paid less than any other specialty. So in many ways pediatricians can blame themselves for not being aggressive enough to solve many of the current problems that exist.

Now let us examine the external factors. Thirty percent of the federal health dollar today is spent on 10% of the population, that is those over 65 years of age. Ten percent of the federal health dollar is spent on 30% of the population, that being those less than 19 years of age. Why is that? One reason is that young people can't vote and politicians are easily influenced by their votes. Medicare is automatic, no matter what one's financial situation, as long as you are of a certain age. On the other hand a young child has to have parents who are in poverty to qualify for medical assistance, even though young parents have so many other obligations that are required in growing families. Added to that is the fact that a child has no choice in birth or parents.

Somehow we must persuade our politicians that those little two pound infants are people and have the same rights to excellent medical care as someone who is 85. In

In addition, the political leaders need to better understand that dollars spent on effective prenatal and perinatal care is the best investment in our future we could ever make.

The leading causes of death in the United States are heart disease, stroke and cancer. Accidents rank fourth. The leading cause of accidental death are motor vehicle accidents (including all-terrain vehicles), burns, drowning, suicide and poisoning. Since most of these so-called accidents occur in younger people, when one looks at death in terms of years of potential life loss, accidents easily become number one. There is no comparison with the other three. We also know the term "accident" is really a misnomer because most are truly preventable. Although the American Academy of Pediatrics, with the help of other groups and the government, has done a

great deal (safety caps, safety seats, banning of ATV's, passage of pool safety regulations, etc.) a great deal more needs to be accomplished. We must continue to educate not only parents but also community leaders, politicians and others with influence. This takes money, yet of the \$550 billion spent on health care less than .3% is spent on prevention and health promotion.

So the question remains how can we make people, and especially our political leaders, see that to solve many of today's problems our country's health dollars need to be funnelled in a different direction. The double-pronged answer seems to be more aggressive pediatricians armed with the well-known facts and more daring and courageous politicians who are willing to take a stand on behalf of a constituency who cannot vote.

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BRIEF SUMMARY

CONTRAINDICATIONS

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Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

Drug Interactions: Animal studies have shown that simultaneous administration of CARAFATE (sucralfate) with tetracycline, phenytoin, digoxin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The clinical significance of these animal studies is yet to be defined. However, because of the potential of CARAFATE to alter the absorption of some drugs from the gastrointestinal tract, the separate administration of CARAFATE from that of other agents should be considered when alterations in bioavailability are felt to be critical for concomitantly administered drugs.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Chronic oral toxicity studies of 24 months' duration were conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). There was no evidence of drug-related tumorigenicity. A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies were not conducted.

Pregnancy: Teratogenic effects. Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients treated with sucralfate, adverse effects were reported in 121 (4.7%).

Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

OVERDOSAGE

There is no experience in humans with overdosage. Acute oral toxicity studies in animals, however, using doses up to 12 gm/kg body weight, could not find a lethal dose. Risks associated with overdosage should, therefore, be minimal.

DOSAGE AND ADMINISTRATION

The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

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ALLAN J. HAMILTON, M.D.

Neurosurgical Resident and Research Fellow,
Massachusetts General Hospital, Boston, Massachusetts.
Captain, U.S. Army Reserve.

EDUCATION Ithaca College, B.A. (Magna Cum Laude);
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RESIDENCY General Surgical Internship. Neurosurgical
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CONTINUING EDUCATION Neurology and Neuro-
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OUTSTANDING ACHIEVEMENTS Olsen Memorial
Fellowship, National Masonic Medical Research Foundation;
Albert Schweitzer Fellowship, International Albert Schweitzer
Foundation; Harvard Medical School Cabot Prize for Best
Senior Thesis; recently published article, "Who Shall Live
and Who Shall Die" in Newsweek Magazine.

“The work I’m doing in the Army Reserve fits perfectly with my academic research interests in civilian life. The Army is very concerned with the effects of high-altitude cerebral edema, which is a mirror model of cerebral hypoxia, something I deal with every day in our neurosurgical intensive care unit. I couldn’t ask for a smoother transition. And that’s true for a lot of Reserve physicians. All we really do is change our clothes, not our mindset.

“Some of the projects the Army is undertaking are on the cutting edge of research. For example, I’m currently involved in developing for the Army a prototype of a non-invasive intracranial pressure-monitoring device that we hope will allow us to measure pressure changes as the brain swells—without drilling holes in the skull. If we can get our design to work, such a device could revolutionize high-altitude medicine as well as civilian neurosurgical care.

“The quality of medicine and the caliber of people I’ve been associated with in the Army Reserve are, without question, equal to civilian hospitals. In fact, I’m giving serious consideration to applying for an active duty academic position in Army Medicine when my residency ends at Massachusetts General.”

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Ovarian Pregnancy

Steve N. London, M.D., and Karen J. Kozlowski, M.D.*

Abstract

Ovarian pregnancy is an unusual variant of ectopic pregnancy. Ovarian pregnancy's true incidence is unknown due to its difficulty in diagnosis. Ovarian pregnancy probably occurs at a greater frequency than is suspected due to its early hemorrhage and disruption of the implantational site. All clinicians and pathologists must keep a high index of suspicion when hemoperitoneum is the result of a bleeding ovary. All tissue removed at the time of ovarian cystectomy for a hemorrhagic ovarian cyst should be carefully submitted to pathology to identify potential trophoblastic tissue.

Ovarian Pregnancy

Ectopic pregnancy arising at a site other than the fallopian tube is extremely rare. Unusual sites where ectopic pregnancies have been reported include the abdominal viscera, the cornual area of the uterus, the cervix and the ovary.

Ovarian pregnancy was first accurately described by Tussenbroek of Brussels in 1899. Since then only 300 cases have been reported. We report the first case of ovarian pregnancy at the University of Arkansas for Medical Sciences in the past 20 years and a review of the literature.

Case Report

A 27-year-old G5, P3, Ab1 (spontaneous), white female was referred to the Gynecology Service at the University of Arkansas for Medical Sciences for evaluation of possible ectopic pregnancies.

The patient's last normal menstrual period was 7 1/2 weeks prior to referral. Two weeks prior to admission she developed vague lower abdominal pain and presented to her physician. A serum pregnancy test was positive. The pain subsided over the next week. Six days prior to admission she developed recurrent lower abdominal cramping with associated vaginal bleeding and passage of

tissue. Pelvic exam by her referring physician was unremarkable. The tissue was sent for pathologic analysis.

She continued to have intermittent pain and vaginal bleeding. A pelvic ultrasound was then performed. The ultrasound revealed an empty uterus with prominent endometrial echo and a fetus with active cardiac motion in the left adnexa within a heterogenous echogenic mass. Fluid was noted in the cul-de-sac.

The patient's past medical and surgical histories were negative. Gynecologic history was significant for three normal spontaneous vaginal deliveries and a previous spontaneous abortion. There was no prior history of pelvic infection or IUD usage. She and her husband desired preservation of fertility.

She was admitted to the Gynecology Service and prepared for exploratory laparotomy. Pathology of the tissue previously passed showed decidua only with no chorionic villi. Hematocrit was 40%.

Exploratory laparotomy findings revealed an ovarian pregnancy implanted on the posterior surface of the left ovary and 175cc of old blood in the cul-de-sac. The uterus, right ovary, both fallopian tubes and left utero-ovarian ligament were intact and without gross pathology. Wedge resection of the left ovarian pregnancy with oversewing of the ovary was performed.

The patient recovered without incidence. Histologic diagnosis was left ovary, corpus luteum, and products of conception.

Discussion

The true incidence of ovarian pregnancy is unknown. Estimates as to its frequency vary from 0.29 to 2.7% of all ectopic pregnancies.¹⁻⁴ The reason for this variation is that ovarian pregnancy is difficult to diagnose at the time of operation. Hallatt, in a series of 25 primary ovarian pregnancies, noted the correct surgical diagnosis was made at the operating table in only 28% of the cases and that an embryo could be identified in only 3 of the 25 cases.⁵

To diagnose ovarian pregnancy the criteria of Spiegelberg must be satisfied.⁶ Spiegelberg's criteria are:

*University of Arkansas for Medical Sciences, 4301 West Markham, Slot 518, Little Rock, Arkansas 72205.

the fetal sac must occupy a portion of the ovary, 2) the fallopian tube must be normal and intact on the affected side of the pelvis, 3) the ovary and sac must be connected to the uterus by the ovarian ligament, and 4) ovarian tissue must be identified in the sac. These strict criteria make it difficult to distinguish at the time of operation a bleeding corpus luteum from an ovarian pregnancy. This difficult differential diagnosis occurs because ovarian pregnancy ruptures the ovary by 40 days after the last menstrual period. Therefore, the reported incidence of the disease depends upon how aggressive the clinician and pathologist search to fulfill Spiegelberg's criteria in clinical situation of hemoperitoneum due to a bleeding ovary.

Increased Incidence in IUD Users

It has been suggested that the incidence of ovarian pregnancy is increasing due to the use of the IUD.⁷⁻¹⁰ Lehfelddt¹¹ in a case controlled retrospective study estimated primary ovarian pregnancy to occur 5.5 times out of every 1,000 ectopic pregnancies. In IUD users, he found primary ovarian pregnancy to occur 5 times out of 45 ectopic pregnancies. Thus, the observed incidence of primary ovarian pregnancy was 20 times greater than expected in women who had an ectopic pregnancy with an IUD in place compared to those women who had an ectopic pregnancy without an IUD. This apparent increase in incidence of ovarian pregnancy among IUD users is factitious. The IUD will prevent intrauterine implantation 99.5% of the time. It is speculated that the IUD also prevents tubal implantations between 25 and 95% of the time, but ovarian implantation is not impeded. Thus, the reported higher incidence of ovarian pregnancy associated with the IUD reflects the protective effect that current IUD users have against ectopic pregnancy.^{12,13}

Mechanism

The mechanism by which ovarian pregnancy occurs is unknown. Obstructed ovulation due to pelvic infections or adhesions after abdominal surgery has long been proposed as being essential for ovarian implantation. The oocyte does not explode out of the follicle but rather oozes out of the follicle with its sticky cumulus. It is felt that adhesions or tubal damage will prevent ovum pick-up and thereby allow the oocyte to be fertilized in or on the surface of the ovary. About the sixth day after fertilization the blastocyst ruptures the zona pellucida. If the pregnancy is still adherent to the ovary, implantation will occur on the corpus luteum, which is extremely vascular. By the fortieth day of gestation trophoblastic invasion of the maternal ovarian arteries occurs causing hemorrhage into the ovary and abdomen. The gestational sac is usually disrupted and expelled through the capsule of the ovary. This could result in the patient presenting with abdominal tenderness, hemoperitoneum and a negative pregnancy test.

If the hemorrhage is mild, there will be only transient localized pain not severe enough to warrant operation and the disrupted pregnancy will be resorbed. Hubbard estimates that one-third of all ectopic pregnancy patients do not require surgery and that the pregnancy will completely resorb. The frequency of resorption of ovarian pregnancy is unknown but has been documented histologically in a case report from a patient who underwent a staging laparotomy for Hodgkin's disease.

The signs and symptoms of ovarian pregnancy are similar to those of tubal pregnancy. Abdominal pain, delay in menses, abnormal vaginal bleeding are the most common symptoms. Signs include abdominal tenderness, pain on cervical movement, blood from the cervical canal, enlarged uterus, adnexal mass and shock. Ultrasound, culdocentesis, laparoscopy, and positive pregnancy test raise the index of suspicion for ectopic pregnancy but not specifically for ovarian pregnancy and often do little more than confirm the necessity for laparotomy.

Treatment

The treatment of choice is conservative resection of the trophoblast from the ovary. This can be done as an ovarian wedge resection or cystectomy.¹⁴ In the past salpingo-oophorectomy was recommended to enable histologic confirmation of Spiegelberg's criteria for ovarian pregnancy. In those patients desiring future fertility removal of a normal tube is not justified. Salpingo-oophorectomy is only justified by extenuating complications, pathology affecting other parts of the reproductive tract or another purpose such as sterilization.

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Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

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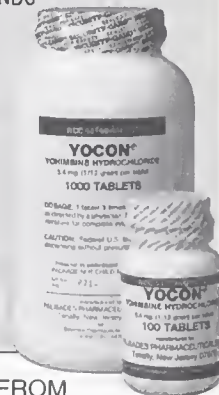
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.^{1,3,4} 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to 1/2 tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.³

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Recognitions by the College of Medicine, UAMS: Faculty and Caduceus Club

William G. Reese, M.D.*

The College of Medicine and its departments and the Arkansas Caduceus Club recognize significant accomplishments of faculty, housestaff, students, alumni, donors and others. This paper, the first of a historical trilogy, is a compilation of these mainly for faculty and members of the Arkansas Caduceus Club. Many of these are omitted from Baird's¹ Medical Education in Arkansas and from Historical Perspectives edited by Baker.² We do not include honors or visiting lectureships connected with the AHECs.

Paramount to date in the various recognitions are the *Isaac Folsom Clinic*, now a component of the Ambulatory Care Center building (Folsom's handsome portrait hangs above a commemorative plaque, the latter dated 1981); the *Jeff Banks Student Union Building*, honoring a highly respected teacher of anatomy, and the *Winston K. Shorey Building* named for a beloved Dean who served from 1961-1974. He was honored posthumously on June 13, 1981 when the "Ed I" Building was named for him. Shorey's portrait was painted by Betty Dortch Russell and is hung in the building's lobby with a memorial plaque. We have no other memorial buildings with the exception of the Col. and Mrs. T. H. Barton Research Building.

These persons and some others below are prominently featured in the first two references; many of these warrant individual autobiographies.

Other enduring awards take different form. *Hooper Drive*, between UAMS and Arkansas State Hospital, was named for our first Dean, Dr. J. O. Hopper, who was also one of the founders of the "Arkansas Lunatic Asylum"; the *Robert D. Watson Library*; the *Horace N. Marvin Bust*, created by Jack Diner and located in the UAMS library next to the Marvin Award plaque; portraits of five founders of the medical school and of the

first three Deans can be seen in the lobby of the Shorey Building. The James L. Dennis portrait (by Russell) is in the UAMS Library and the Jeff Banks portrait (by Furgeson) is in the building named for him. The College of Medicine has a portrait of former Dean and alumnus, Thomas A. Bruce. Departmental portraits included those of Drs. Ted Panos, Willis Brown, Gilbert Campbell, Richard Ebert, William Reese, John Peters, and Roscoe Dykman.

Several faculty members have been honored by plaques listing awards to students and house officers; these will be listed in other papers.

Beyond state support, sizeable endowments have and are supporting UAMS and particularly the College of Medicine. Building upon the work of predecessors, Chancellor Harry Ward is very effective in his fund-raising activities with great help from the UAMS Foundation which he inaugurated. Skipping those in between, the first Chairman of the Foundation (who remains active) is Sam M. Dixon and the 1988 incumbent is B. Finley Vinson. A current example of the fruits of such efforts is the Arkansas Cancer Research Center, of which Kent C. Westbrook is medical director.

Endowed Chairs

Chairs are established and incumbents are named by the Board of Trustees of the University of Arkansas. In our College the named Chairs are often attached to particular positions rather than to particular individuals. For each Chair there is a beautifully designed gold medallion,

* Marie Wilson Howells Professor and Chairman Emeritus, University of Arkansas for Medical Sciences, 4301 West Markham, Slot 589, Little Rock, Arkansas 72205.

to be worn by the designee at official events. When an incumbent leaves the Chair, he receives a mounted bronze replica of the medal.

WOHDAN Faculty Chair in Child Psychiatry

This first continuing Chair in the College was established on October 30, 1980 and on November 14, 1980. Dr. John E. Peters was named to the Chair, which he held until he relinquished his position as Head of the Division of Child Psychiatry on June 30, 1986. Peters became WOHDAN Professor of Child Psychiatry Emeritus on July 1, 1988. (In 1967 the Board of Trustees of the University of Arkansas approved establishment of the Division of Child Psychiatry and the Division of Behavioral Sciences headed, respectively, by Peters and Roscoe A. Dykman). The incumbent WOHDAN professor is Richard L. Livingston.

This Chair is financed by an endowment which consists of \$55,000 from the original donors plus \$50,000 from various other contributors. When the Chair was established the full amount was over \$150,000. The initial challenge grant came from the Board of "The Working Women's Home and Day Nursery" dating from 1914 and disbanded in the early 70's when its functions were assumed by Federal and other programs.

During the Peters' years the income from the endowment was used mainly to help support Resident Fellows in Child Psychiatry.

Marie Wilson Howells Professor and Chairman of the Department of Psychiatry and Behavioral Sciences

This is the most heavily endowed Chair in the College (and in the University of Arkansas). This position was occupied by William G. Reese from February 9, 1985 to June 30, 1985 (investiture on May 4, 1982) until he was replaced in the Chair by Frederick G. Guggenheim. On July 1, 1987, Reese was named Emeritus. The donor died on November 27, 1979 bequeathing assets worth about \$5 million to the University of Arkansas with the provision that half the proceeds of the endowment go to UAMS for development of psychiatry and that the other half be divided for development of psychology at Fayetteville (60%) and at Little Rock (40%). The income for psychiatry (over \$200,000 annually) has gone to support research and other academic initiatives.

Algernon Sidney Garnett Chair in Family and Community Medicine

The University Board, on January 20, 1984, established the "Dr. Algernon Sidney Garnett Endowment Fund" to create professional chairs, at least \$250,000 per chair, for the purpose of "the well-being of education in family medicine in Arkansas." The original endowment

amounted to \$949,000 and increased to \$1.25 million by December 1987. Effective July 1, 1984 Kenneth G. Goss, M.D., Chairman of Family and Community Medicine was installed as the first *Algernon Sidney Garnett* Professor.

The fund was created by a gift from the late Rose K. Garnett, daughter-in-law, fulfilling the wishes of her husband. Established as a student loan in 1956, the Garnett memorial was changed by the donor in 1971 to support family medicine. Dr. Garnett retired from the U. S. Navy in 1861 and practiced medicine in Hot Springs for 45 years before his death in 1919.

Jerome S. Levy Chair in Gastroenterology

On April 18, 1975 the University Board of Trustees created the "Dr. Jerome S. Levy Educational Fund" and pledged to establish an endowed chair when "the amount in hand" was sufficient at which time income from the fund would "be used to supplement the salary of the professor occupying the Chair and/or for other support of teaching activities associated with it." By 1985 the fund had reached a level of \$167,000 and Dr. E. Clinton Texter, Jr., was appointed to the activated Chair.

Wilbur D. Mills Chair on Alcoholism and Drug Abuse Prevention

The endowment supporting this unoccupied Chair may be novel since the funds came from a cooperative effort of State and Federal governments and private contributions. The Chair was established by the Board of Trustees in 1986.

The Board accepted the name proposed by the Advisory Council of the State Office of Alcohol and Drug Abuse Prevention (OADAP). OADAP required that the Chair be in the Department of Internal Medicine of our College. OADAP had a strong voice since they responded to a request by Chancellor Ward and Dean Bruce by providing two challenge grants totalling one-half million dollars. The Foundation Fund Board of UAMS successfully accepted the challenge. (Paul F. Roth, President of the Arkansas Division of Southwestern Bell Telephone Company and a member of UAMS Foundation, was chairman of the fund-raising committee). Responding to requests by UAMS officials, matching funds of \$440,000 were provided through 1985 and 1987 Acts of the Arkansas General Assembly. The initial Bill 1965 was introduced by Representatives Charlotte Schnexnayder (mother of a current medical student), Northcutt, Collier, Wynne and Foster. The Act, which provided for creation of the Chair, appropriated funds from a three percent tax of gross receipts from the sale of alcoholic beverages. Additional revenue came from several Foundations, including \$5,000 from the Kroger Foundation. In December 1987 receipts or pledges for the endowment amounted to nearly \$1.25 million and accrued interest had reached \$90,670.

Lectureships

The *Ted Panos Memorial Lectureship* (Pediatrics) was established in 1970 in memory of a superb clinician, investigator, and chairman from 1958 until his death in 1970.

The *Masauki Hara Lectureship* (Surgery) was established in 1968 as a memorial to an excellent man who was a fine surgeon. At the suggestion of Gilbert Campbell, then Chairman of the Department of Surgery, the initial endowment of nearly \$20,000 came from funds of the Arkansas Heart Association which previously helped fund Dr. Hara's work. Proceeds from the fund provided distinguished annual speakers who spoke at UAMS and at the Surgical Society meeting during the same visit.

The *Gilbert Campbell Lecture Series* in Surgery were established by Dr. Robert Barnes soon after he replaced Dr. Campbell as chairman in 1983.

The *Annual Jerome S. Levy Lecture Series* (Department of Medicine) was established in 1984. (See endowed chairs).

The *Dr. Raymond C. Cook Lectureship* (Department of Ophthalmology) was adopted by the Board of Trustees on January 20, 1984. Dr. Cook was a prominent ophthalmologist who was an alumnus of this School, a volunteer faculty member who taught medical students and residents for over 35 years and a strong supporter of his Department. In 1970 he organized prominent business leaders of the Chamber of Commerce in a fund-raising campaign to modernize facilities and equipment for his Department. The supporting endowment fund contributed by Dr. Cook's friends and colleagues amounted to \$57,000. Dr. John Shock, current Chairman stated that, to date, this Lectureship has been used to bring three outstanding ophthalmologists to lecture to the Annual Ophthalmology Residents' and Alumni Day meeting.

The *Holt-Krock Lectureship*, provided by the Fort Smith Holt-Krock Clinic, brings prominent lecturers selected by the Dean to the Campus. The Dean rotates the choice to the several clinical departments.

The *Arkansas State Medical Society Lectureship* brings to the Campus prominent lecturers in basic and clinical medicine who are selected on the advice of the Dean. The primary audiences are medical students, with faculty and others welcome.

Distinguished Service Awards

The *Distinguished Service Award* of the College honors persons who are not regular faculty members (and need not be physicians) and who have made outstanding contributions to the College. The first (1962) awards went to Drs. W. B. Grayson, H. Fay Jones and Paul L. Mahoney; and the most recent awards to Drs. Raymond P. Miller, Joseph A. Norton, Richard V. Ebert and G. Thomas Jansen. Non-physicians honored have been William A. Eldredge, Robert Harvey, Dale Bumpers and

Table I.

Arkansas Distinguished Alumnus Award Recipients

Harry M. Meyer (53, 73)	Thomas Allen Bruce (55, 83)
William J. Darby (37, 74)	Kelsy J. Caplinger (63, 84)
Samuel Lee Kounts (58, 76)	Warren L. Carpenter (65, 85)
Byron Gill Brogden (52, 78)	James W. Headstream (39, 86)
Jack P. Whisnant (51, 79)	A. J. Thompson (68, 87)

Arkansas Caduceus Club Distinguished Faculty Recipients

Winston K. Shorey (73)	Robert S. Abernathy (83)
William G. Reese (74)	Roger B. Bost (45, 84)
James L. Dennis (75)	Stevenson Flanigan (85)
William J. Flanigan (55, 76)	James E. Dougherty (46, 86)
Kent C. Westbrook (65, 78)	John E. Peters (87)
George L. Acherman (54, 79)	Lawrence Scheving, Ph.D. (87)
Betty A. Lowe (56, 82)	

Sidney S. McMath. (The complete list of 66 is available by request).

Awards of the Arkansas Caduceus Club

The Arkansas Caduceus Club, established in 1969 on the initiative of Dean Winston K. Shorey, provides membership to alumni of the College; physicians (not necessarily alumni) practicing in Arkansas; present and former housestaff members; and other "friends of the College."

In addition to Special Citations (for example to Horace N. Marvin) the Club has two standing awards: Distinguished Alumnus Award and Distinguished Faculty Award. The honoree receives an appropriate plaque and citation. Recipients are listed in Table I with year of M.D. followed by year of Award in parentheses.

Conclusion

I hope that this is an interesting account for persons who belong to the College and/or the Society. We shall include medial student and housestaff awards in later papers.

Of many who deserve acknowledgement for providing information for this summary, I shall name only Janet Honeycutt (who succeeded Jeane Hundley as Executive Director of the Arkansas Caduceus Club) and Richard B. Clark, M.D., Chairman of the History Committee, who encouraged this submission.

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ELECTROCARDIOGRAM OF THE MONTH

David Martin, M.D.
John W. Watson, M.D.
UAMS Division of Cardiology
Little Rock, Arkansas

CLINICAL HISTORY:

J. D. is a 60-year-old man who presented to the hospital because of syncope. He had been on quinine for reasons that were unknown to his attending physicians. His physical examination was normal except for prolongation of the QT interval. Shown here is a rhythm strip obtained early in his hospitalization. What do you think.

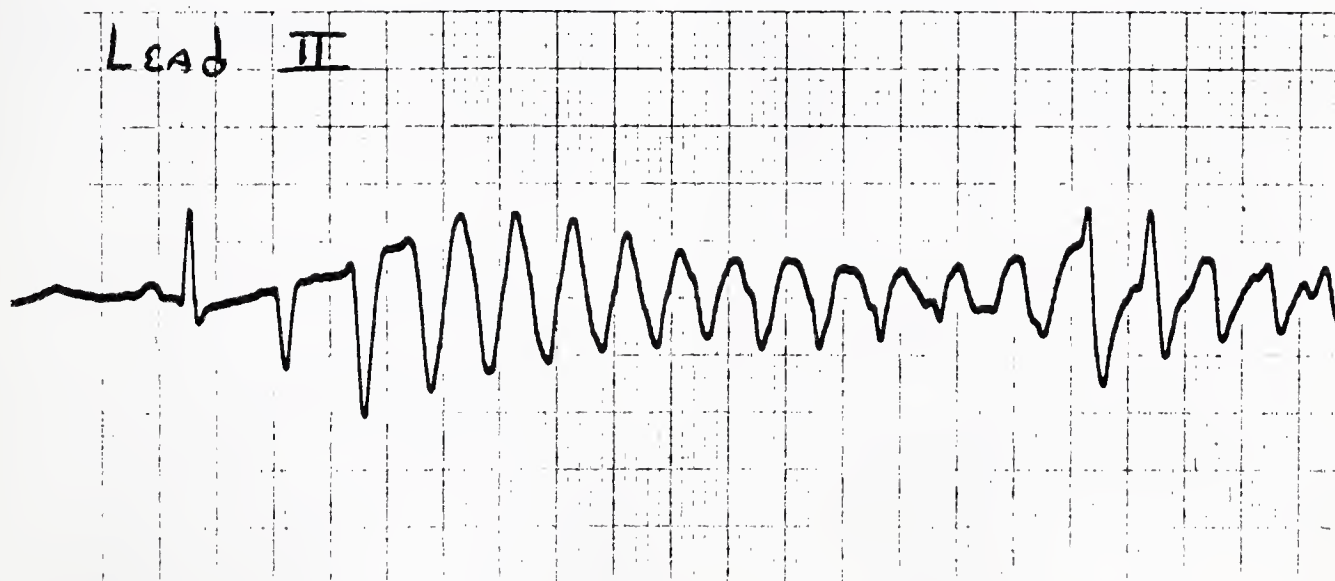
DISCUSSION:

The pattern noted on the rhythm strip is that of a regularized wide QRS tachyarrhythmia at a rate of 270/minute. The QRS complexes are sometimes positive and sometimes negative with the transition from one to the other being gradual and not haphazard.

Complexes that are nearly isoelectric mark the transition points from positive to negative complexes and conversely. The pattern is that of "torsades de pointes" (twisting of the points). It is often thought to be an intermediary ventricular arrhythmia falling between ventricular tachycardia and ventricular fibrillation. It is usually seen in the setting of a prolonged QT interval.

Torsades de pointes had been associated with quinidine, procainamide, disopyramide, electrolytic disruption, phenothiazines, CNS bleeding, bradyarrhythmia, and variant angina.

The editor wishes to thank Dr. Martin of Conway, Arkansas for his assistance in this month's feature.



Case Report on *Escherichia Hermannii* Isolated in an Arkansan

E.N. McCollum, M.D.*

Case History

A 37-year-old white male was seen in our clinic on the first occasion in May, 1985. He had a history of chronic diarrhea for six to seven years which had been treated with steroid enemas. He stated that over the past ten to twelve months he had begun to have increasing amounts of blood in his stools. His bouts of mucoid and bloody stools, which occurred two or three times a month and lasted three to four days, did not clear until he started steroid enemas. He had been tentatively diagnosed as having a possible ulcerated colitis. He had undergone three barium enemas in the last six years which revealed nothing more than spasm in the sigmoid. A colonoscopy and proctoscopy revealed mild erythema and a possible inactive ulcerative colitis. Multiple biopsies taken at the rectum and throughout the colon in 1984, reported small bowel mucosa with well preserved villi, numerous paneth cells present in the gland portion, and lamina propria containing scattered mononuclear cells.

Upon further questioning, the patient reported working on a hog farm in Sharp County during an epidemic of bloody diarrhea in the hogs. He was employed to help give the hogs injections of antibiotics. During this time he sustained a severe knee sprain. He fell into the hog pen and was exposed for several hours to the litter of the sick hogs. The patient was eventually rescued from his plight and taken home. That evening he spiked a 105 degree Fahrenheit fever, developed severe abdominal cramping, and bloody diarrhea. He was taken to the nearby hospital where a two-week hospitalization failed to reveal any definitive cause for his diarrhea. A stool culture was reported as normal flora. Since that time, the patient has been followed by rather infrequent barium enemas, sigmoidoscopy, and colonoscopies. He was

treated with azulfadine for approximately four years; however, it had been discontinued for the last two years. During the six years, he had developed frequent attacks of left lower quadrant pain, some left upper quadrant pain, and more recently, right quadrant pain, colicky in nature. Workups had been essentially negative for an etiology of this pain.

Discussion

When seen in May, 1985, he was found to have a slight splenomegaly with normal nuclear scan and normal ultrasound of the liver and spleen. In May, 1985, a stool culture was planned, but not obtained, due to noncompliance of the patient. He was next seen in August, 1986, for bloody diarrhea. A stool culture was obtained at this visit, and was reported by the Gravette Medical Center Hospital Laboratory as positive for *Escherichia hermannii*. Confirmation of this organism was obtained from the Arkansas State Health Laboratory. This organism showed resistance to ampicillin, penicillin, and macrodantin.

Because of the sensitivity of this organism to trimethoprim/sulfa, the patient was started on this antibiotic for six weeks at double strength. The patient has been asymptomatic since that time with no recurrence of diarrhea. A repeat stool culture was done on December 23, 1986, which revealed only normal gram positive flora.

Characteristics of *Hermannii*

Escherichia hermannii was reported by Brenner, Davis, Steigerwalt, and Allen from the Enteric Section, Center for Infectious Diseases, Centers for Disease Control, Atlanta, Georgia, in association with Indiana University, Tohoko School of Medicine, Sendai, Japan, and Walter Reed Army Institute of Research, Washington D.C., and in the Journal of Clinical Microbiology, April, 1982. *Escherichia hermannii* was initially identified in a DNA relatedness study where a peculiar KCN positive,

*McCollum Clinic, Post Office Box 127, Decatur, Arkansas 72722.

cellobiose positive, yellow pigmented strain was found to be 84-91% interrelated but only 35-45% related to *E. coli*. The species name of *hermannii* was proposed for the group of organisms formerly called Enteric Group II by CDC. Twenty-nine strains of *E. hermannii* have been isolated in the United States. These strains come initially from various sources, principally wounds, sputum, stools, and three from foods.

E. hermannii is a gram negative, oxidase negative, fermentative, motile rod. In addition to yellow pigmentation and positive tests for KCN and cellobiose, the biochemical reactions characteristic of thirty-two strains of *E. hermannii* were as follows: gas from glucose; acid from glucose, maltose, xylose, arabinose, rhamnose, and mannitol; and no acid from adonitol or inositol. Yellow pigmentation alone separates *E. hermannii* from all the enterobacteriaceae, except from certain species of enterobacter and an occasional *E. coli* strain. Positive KCN, cellobiose, and motility tests separate *E. hermannii* from shigella. Positive motility and ornithine decarboxylase, and negative adonitol and sorbitol differentiate *E. hermannii* from klebsiella. It is distinguished from enterobacteria on the basis of its positive indole and negative Voges-Proskauer reactions. It is resistant to penicillin, ampicillin, and carbenicillin, and sensitive to most commonly used antibiotics.

Fifty percent of *E. hermannii* isolates are found in wounds, followed by sputum or lung isolates with 25%, and 20% from stools. Eleven of fifteen isolates were from males, ages 5-50 years. There were no isolates from the urinary tract or the female reproductive tract. The thirty-two strains of *E. hermannii* were isolated from twelve states, most of which were located on the east and west coasts of the United States.

In their conclusion, they stated that "assuming that the CDC sample represents the frequency with which *E. hermannii* is isolated in the United States, we believe it is a rare strain that may cause human disease. A retrospective study as well as a prospective study of new isolates will be necessary to determine its true incidence and clinical significance".

The only other published literature on *E. hermannii* was found in the *Journal of Microbiology*, August 1985, "Colonization of Human Wounds," by E. Vulneris, Clyde Thornsberry, and J.J. Farmer, III, from the University of Hawaii and the Enteric Section, CDC in Atlanta.

In this report, clinical descriptions of twelve Hawaiian patients from whom *E. hermannii* was isolated. Ten patients had soft-tissue infections with multiple bacteria, particularly *Staph aureus*. The other two patients had purulent conjunctivitis associated with *Staph aureus*, and infected malignant peritonitis with multiple organisms, respectively. In none of the cases was *E. hermannii* found in abundant quantities or considered pathogenic.

In preliminary animal pathogenicity studies, twelve strains of *E. vulneris* and *E. hermannii* failed to cause serious symptoms in four-week old mice when 10^7 cells were injected intraperitoneally. Susceptibility studies of forty strains to twenty antimicrobial agents showed susceptibility to third-generation cephalosporins, aminoglycosides, trimethoprim/sulfa, and trimethoprim; moderate susceptibility or resistance to penicillin, tetracycline, chloramphenicol, and nitrofurantoin.

Conclusion

A 37-year-old white male was seen in the clinic with a six year history of chronic inflammatory bowel disease. He experienced an increase in recurring bouts of diarrhea, cramping, mucus and blood in his stools. The onset was closely associated with hogs that had bloody diarrhea. The predominating organism was *Escherichia hermannii*, and the patient was treated with trimethoprim/sulfa, double strength, given orally for six weeks.

Although this is a single isolated case, it is to my knowledge the first association between an animal's bloody diarrhea and a subsequent human infection due to *E. hermannii*, a rather unique, poorly understood species.

Because all symptoms resolved after appropriate treatment with an antibiotic demonstrated to be effective in infections with *E. hermannii*, it is suggested that this bacteria be searched for in patients which chronic enteritis who have had some association with sick hogs.

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Adenocarcinoma of the Breast with Metastases to Sternum and Lungs

*S. William Ross, M.D., William E. Atkinson, M.D., W. Ducote Haynes, M.D., and Jerry L. Prather, M.D.**

Problem

A 61-year old woman presented to the Second Panel with a previous diagnosis of carcinoma of the breast with lymph node, sternal and thoracic metastases for a discussion of her treatment options.

A mastectomy was performed three years earlier on the right breast when cancer of the breast was diagnosed in this postmenopausal patient. Two positive nodes were found, and her estrogen receptor (ER) level was 85 with the progesterone receptor (PR) level at zero. The patient received hormone treatment with tamoxifen, 10 mg daily for one year and did well. Approximately four months ago a mass was found on her right chest wall. A 2 cm subcutaneous mass was excised, indicating recurrent carcinoma of the breast. The patient was again placed on tamoxifen 10 mg twice daily. One month ago computerized axial tomography (CAT) scan of the chest revealed a 3 cm mass in the left upper lung and a 1.5 x 2 cm mass in the right lung. At that time hormonal treatment with tamoxifen

was changed to megestrol acetate (Megace) 40 mg three times daily.

The patient's physician had planned to follow up with a chest x-ray in eight weeks from the date Megace was initiated. If her condition should appear worse at that time, he planned to start the patient on chemotherapy. It was during that eight-week period that the patient presented to the Second Opinion Panel for information on the management of her case. Her primary concerns were

A Social Worker's Opinion

*Harriet A. Farley, LMSW**

This 61-year-old woman presented to the panel accompanied by her husband of 40 years, who is a minister, and their 30-year-old daughter. During the physicians' discussion with the patient and her family, the patient displayed physical, emotional, and verbal signs of extremely high levels of anxiety and anger. She also demonstrated behavior and affects that could be viewed as histrionic. She discussed her past and present medical problems in great detail, at times to the point of perseveration, and consistently drew attention back toward herself when it was diverted.

There appeared to be a significant level of tension between the patient and her family members present, who seemed uncomfortable with expressing their questions or comments. The patient's husband maintained a passive stance; the daughter asked limited questions with reservation. The patient's emotional state and resulting behavior, along with the effect of these on her family, prevented interaction from being as satisfactory as it could have been.

Following the panel discussion which I attended, I met privately with the patient and her family for the purposes of addressing the emotional aspects of cancer diagnosis and treatment, identifying resources, assisting the patient and her family with

(see Social Worker, page 525)

*St. Vincent Infirmary Cancer Center, St. Vincent Infirmary, Two St. Vincent Circle, Little Rock, Arkansas.

Understanding (1) different results of chest x-rays and CT scans of the chest, (2) the sensitivity of bone scans, and (3) the varying degrees of effectiveness of hormonal therapy.

Pathology Review

Dr. Atkinson: Review of the histopathology confirmed the infiltrating duct cell carcinoma of the right breast with two axillary lymph nodes containing adenocarcinoma (stage B) with subsequent chest wall recurrence, metastatic disease to sternum and lungs (stage D).

Diagnostic X-Ray Review

Dr. Prather: Chest x-ray taken one month before patient presented revealed a 3 x 3.5 cm mass in the left upper lung. No mass was seen in the right lung. A CT of chest also taken one month earlier showed two lesions: a 3 cm mass in the left upper lung and a 1.5 x 2 cm mass in the right lung. The patient was assured that it was not uncommon for CT scans of the chest to identify lesions which are not apparent when plain x-ray films of the chest are examined. CT scan of the thorax taken four months earlier revealed a lesion involving the anterior thoracic wall on the right. A CT scan of the abdomen taken four months earlier was negative for metastatic disease. Bone scans taken in 1985 and 1986 showed no evidence of malignancy. Patient was advised to have another mammogram since the last one reported was done one year ago.

Medical Oncology Opinion

Dr. Ross: The panel agreed that antiestrogen therapy was appropriate therapy initially for this postmenopausal woman with positive ER level. She did well for two years post-therapy until she had chest discomfort and felt a mass in the right chest wall. A 2 cm mass was excised, and the patient was again placed on antiestrogen therapy for three months at which time CT scans revealed a lesion in each lung. Treatment was changed to Megace, and the patient reported that her chest had been free of pain for the past 4 weeks. The panel agreed with her physician that a 6-8 week trial was necessary to see if she responded effectively to Megace.^{1,2} A repeat chest x-ray at that time would indicate improvement, if any. We advised the patient that some time in the future Megace might become ineffective. At that time chemotherapy

would be indicated, but she should discuss her treatment options with her physician.^{3,4}

Radiotherapy Opinion

Dr. Haynes: The patient apparently responded well to hormonal therapy when breast cancer was first diagnosed three years before patient presented to the panel. The patient had recurrent breast cancer with asymptomatic sternal and thoracic metastases, which was being treated with Megace. If the area in the sternum should become symptomatic, palliative radiation therapy would be indicated.

Consensus

The panel agreed that the patient should continue to use Megace for a total of 6-8 weeks since the chest pain apparently disappeared after Megace was initiated. A repeat chest x-ray at that time would indicate whether chemotherapy should be introduced. The panel agreed that chemotherapy might still be indicated in the future if Megace ceased to be effective. If pain should return to the chest, a low dose of radiation could be used to alleviate pain.

The patient was assured that the treatment thus far had been appropriate and timely. The panel explained the sensitivity of CT scans and bone scans as opposed to x-ray films. Also, the apparent effectiveness of hormone therapy for some period of time followed by its ineffectiveness was explained on the basis of different degrees of hormonal sensitivity in the individual tumor cells, the heterogeneity of the tumor, and probable changes in the tumor cells themselves.

Acknowledgment

The authors wish to thank Majorie Mcminn for her editorial assistance in the preparation of this paper.

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(Social Worker, continued)

clarifying and processing information they had heard, and facilitating communication and problem-solving.

During the interview initiated to obtain further social and medical history, it was revealed that the patient had an extensive history of various illnesses and somatic complaints, which correlated with stressful and difficult situations in her life, and which at times prevented her from dealing directly with stressful or conflict-producing situations. The patient reported that she had always been uncomfortable with or incapable of dealing well with conflict or stress and that her responses usually had been to internalize and retreat or to externalize and, to an extreme degree, express emotions inappropriately.

The patient's comments seemed to indicate an external locus of control (the perception of control being outside one's self often leads to feelings of helplessness and giving in to other people or illness. It also increases the possibility of individuals exerting control in inappropriate ways.) It was revealed during the interview that the patient had maintained extensive control for years within the family system with her illnesses and somatic complaints. The patient's other primary tool for wielding power in the family had been her anxiety, which was a result of numerous fears. The patient's biological family, as well as her "church families" through the years, had responded to her anxieties and somatizations, thus reinforcing them.

In addition to the patient's control of others with her illnesses, the patient tended to maintain a negative cognitive set and to perpetuate negative expectations for herself and her situation. The interplay of the patient's negative cognitions, her anxiety, and her rigidity led to an exacerbation of her negativism and made intervention to change those patterns difficult, especially for family members or others who were closely involved.

From the interview it seemed that the patient's anger resulted primarily from her fears and from her sense that her emotional responses to her illness had not been addressed or acknowledged. Gentle confrontation was used in pointing out to the patient how some of her responses could have been interpreted as hostile or hysterical and, therefore, could have been alienating or ignored. The fact that this alienation could lead to the patient being discounted or feeling discounted was discussed, and the patient's family was supportive of efforts to move this point into the patient's awareness. They seemed to be more willing to take risks they had not been willing to take with the patient previously.

This discussion created the opportunity to deal with the concept of the patient's responsibility in dealing effectively with her illness and her responses to it. Since the

patient maintained an external locus of control regarding her illness and other aspects of her life, she also had difficulty assuming responsibility. Providing the patient with the option of taking more responsibility allowed me to reinforce that choices do exist, to decrease the patient's dependence upon members of her support system, to decrease the patient's sense of helplessness and lack of control, to increase the patient's sense of accountability, and to increase the patient's awareness and ability to deal with her situation.

An issue brought up by the patient during this session was death and what seemed to be her ambivalence regarding living versus dying. This issue was dealt with in general terms, rather than in specifics that applied to the patient, as it was felt that more time and assessment would be needed in order to evaluate the patient's needs in this area and to determine whether or not she was ready to deal with this on a conscious level.

Once rapport was established with the patient through a combination of support and confrontation, she responded openly; her anxiety and defensiveness were markedly decreased; and she seemed receptive to feedback and recommendations. Her family also seemed to respond positively to the information and support they received and to the permission they sensed to discontinue reinforcing certain tendencies of the patient. They also expressed relief at being able to relinquish some of the responsibility that the patient verbalized a willingness to assume for herself.

At the beginning of this session, family members directed their remarks to the social worker rather than to participate in a mutual exchange. This unwillingness to address each other was no doubt the result of the extreme tension created by the patient's behavior. As the session progressed, however, improved communication resulted in more spontaneous interactions between family members with increased sharing and participation.

Recommendations for the patient and her family included suggestions that the patient speak with her physician about the degree of her anxiety and that she and her family consider individual and family therapy with a qualified psychotherapist. In addition, various forms of relaxation therapy (e.g., autogenic, progressive muscle and imaging) were discussed. Finally, resources for reading materials were suggested to assist the patient with regaining some control and responsibility and to assist her and her family with dealing more effectively with the emotional and cognitive aspects of her disease.

**Department of Social Services, St. Vincent Infirmary Medical Center, Two St. Vincent Circle, Little Rock, Arkansas.*



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Before prescribing, see complete prescribing information in SK&F LAB CO. literature or PDR. The following is a brief summary.

Contraindications: There are no known contraindications to the use of 'Tagamet'.

Precautions: While a weak antilindrogenic effect has been demonstrated in animals, 'Tagamet' has been shown to have no effect on spermatogenesis, sperm count, motility, morphology or in vitro fertilizing capacity in humans.

In a 24-month toxicity study in rats at dose levels approximately 9 to 56 times the recommended human dose, benign Leydig cell tumors were seen. These were common in both the treated and control groups, and the incidence became significantly higher only in the aged rats receiving 'Tagamet'.

Rare instances of cardiac arrhythmias and hypotension have been reported following the rapid administration of 'Tagamet' HCl (brand of cimetidine hydrochloride) injection by intravenous bolus.

Symptomatic response to 'Tagamet' therapy does not preclude the presence of a gastric malignancy. There have been rare reports of transient healing of gastric ulcers despite subsequently documented malignancy.

Reversible confusional states have been reported on occasion, predominantly in severely ill patients.

'Tagamet' has been reported to reduce the hepatic metabolism of warfarin-type anticoagulants, phenytoin, propranolol, chlordiazepoxide, diazepam, lidocaine, theophylline and metronidazole. Clinically significant effects have been reported with the warfarin anticoagulants; therefore, close monitoring of prothrombin time is recommended, and adjustment of the anticoagulant dose may be necessary when 'Tagamet' is administered concomitantly. Interaction with phenytoin, lidocaine and theophylline has also been reported to produce adverse clinical effects.

However, a crossover study in healthy subjects receiving either 'Tagamet' 300 mg. q.i.d. or 800 mg. h.s. concomitantly with a 300 mg. b.i.d. dosage of theophylline (Theo-Dur®, Key Pharmaceuticals, Inc.),

demonstrated less alteration in steady-state theophylline peak serum levels with the 800 mg. h.s. regimen, particularly in subjects aged 54 years and older. Data beyond ten days are not available. [Note: All patients receiving theophylline should be monitored appropriately, regardless of concomitant drug therapy.]

Lack of experience to date precludes recommending 'Tagamet' for use in pregnant patients, women of childbearing potential, nursing mothers or children under 16 unless anticipated benefits outweigh potential risks; generally, nursing should not be undertaken in patients taking the drug since cimetidine is secreted in human milk.

Adverse Reactions: Diarrhea, dizziness, somnolence, headache, rash. Reversible arthralgia, myalgia and exacerbation of joint symptoms in patients with preexisting arthritis have been reported. Reversible confusional states [e.g., mental confusion, agitation, psychosis, depression, anxiety, hallucinations, disorientation], predominantly in severely ill patients, have been reported. Gynecomastia and reversible impotence in patients with pathological hypersecretory disorders receiving 'Tagamet', particularly in high doses, for at least 12 months, have been reported. Reversible alopecia has been reported very rarely. Decreased white blood cell counts in 'Tagamet'-treated patients [approximately 1 per 100,000 patients], including agranulocytosis [approximately 3 per million patients], have been reported, including a few reports of recurrence on rechallenge. Most of these reports were in patients who had serious concomitant illnesses and received drugs and/or treatment known to produce neutropenia. Thrombocytopenia [approximately 3 per million patients] and a few cases of aplastic anemia have also been reported. Increased serum transaminase and creatinine, as well as rare cases of fever, interstitial nephritis, urinary retention, pancreatitis and allergic reactions, including hypersensitivity vasculitis, have been reported. Reversible adverse hepatic effects, cholestatic or mixed cholestatic-hepatocellular in nature, have been reported rarely. Because of the predominance of cholestatic features, severe parenchymal injury is considered highly unlikely.

likely. A single case of biopsy-proven periportal hepatic fibrosis in a patient receiving 'Tagamet' has been reported.

How Supplied: Tablets: 200 mg. tablets in bottles of 100; 300 mg. tablets in bottles of 100 and Single Unit Packages of 100 [intended for institutional use only]; 400 mg. tablets in bottles of 60 and Single Unit Packages of 100 [intended for institutional use only], and 800 mg. Tiltab® tablets in bottles of 30 and Single Unit Packages of 100 [intended for institutional use only].

Liquid: 300 mg./5 ml., in 8 fl. oz. (237 ml.) amber glass bottles and in single-dose units (300 mg./5 ml.), in packages of 10 [intended for institutional use only].

Injection: Vials: 300 mg./2 ml. in single-dose vials, in packages of 10 and 30, and in 8 ml. multiple-dose vials, in packages of 10 and 25.

Pre-filled Syringes: 300 mg./2 ml. in single-dose pre-filled disposable syringes.

Plastic Containers: 300 mg. in 50 ml. of 0.9% Sodium Chloride in single-dose plastic containers, in packages of 4 units. No preservative has been added.

ADD-Vantage® Vials: 300 mg./2 ml. in single-dose, ADD-Vantage® Vials, in packages of 25.

Exposure of the premixed product to excessive heat should be avoided. It is recommended the product be stored at controlled room temperature. Brief exposure up to 40°C does not adversely affect the premixed product.

'Tagamet' HCl (brand of cimetidine hydrochloride) injection premixed in single-dose plastic containers is manufactured for SK&F Lab Co. by Travenol Laboratories, Inc., Deerfield, IL 60015.

* ADD-Vantage® is a trademark of Abbott Laboratories.

BRS-TG-1738

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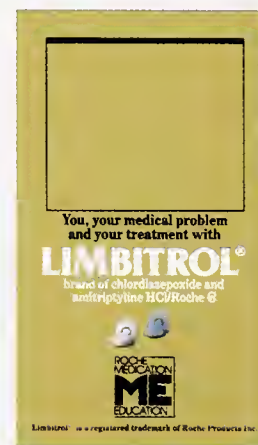
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PLANDEX 35201

COMPLIANCE NEWS

*Don Phillips, P.D.
Public Health Pharmacy Administration
Arkansas Department of Health*

On July 1, 1987, the Drug Enforcement Administration (DEA) began the phase-in of a multi-year registration system for all practitioners currently registered with the DEA or who will apply for registration.

The selection process for determining which current registrants will be renewed for 1, 2, or 3 year periods will be through sequential sorting. All new applicants for registration after July 1, 1987 will be registered initially for a period of 28 to 39 months depending on when they apply. Their registration will require renewal every three years thereafter.

The fee for registration remains the same at \$20 per year. The correct fee and renewal period for each registrant will be pre-printed on the renewal application forms issued to the registrants due for renewal.

According to Arkansas Board of Pharmacy Regulations effective December 12, 1987, at least every 12 months all prescriptions for legend drugs, which are not controlled substances when refilled, must be verified by the prescribing practitioner, a new prescription written, and a new prescription number assigned to the prescription. Any prescription refilled more than one year after its origination will be in violation of the regulation.

If you prescribe an emergency Schedule II prescription over the telephone to a pharmacy, the quantity is limited to an amount sufficient to last the patient until you can supply the pharmacist with a signed prescription. This amount supplied by the pharmacist on an emergency telephone order can never exceed a 72-hour supply.

A Schedule II prescription can be dispensed by a pharmacist up to six months after it is written in Arkansas. The pharmacist should ascertain that its use is still reasonable by contacting the prescription physician when in doubt about any Schedule II prescription.

Arkansas Department of Health Regulations pertaining to controlled substances require:

1. Recordkeeping of all controlled substances ordered, received, administered, and dispensed or otherwise disposed of are to be kept in a readily retrievable manner, separate from patient records. Samples of controlled substances are not excluded from this requirements.
2. Each physician shall notify the Division of Pharmacy Services, Arkansas Department of Health, by calling immediately 661-2325 upon discovery of any suspected loss/theft and/or diversion of any controlled substance.
3. All controlled substances no longer usable because of deterioration or expired dating or are unwanted, must be delivered in person or by mail, or other means of shipment with return receipt to the Division of Pharmacy Services, Arkansas Department of Health, 4815 West Markham, Little Rock, AR 72205-3867. The controlled substances must be accompanied by the Report of Drugs Surrendered Form (PhA:DC-1) furnished by the Division.

For additional information contact the Division of Pharmacy Services, Arkansas Department of Health at (501) 661-2325.

William M. Burns, M.D. Physician, Politician and Futurist

*Aubrey J. Hough, Jr., M.D., Barbara Pitts,
Richard B. Clark, M.D.*

The study of history inevitably leads to two opposing propositions: that men make the times or that the times make the men. Regardless of one's outlook on these basic theories, the life and career of William M. Burns, M.D. were both extraordinary, for he truly influenced his time and that of future generations in countless ways.

Born February 4, 1878, in Gadsden, Tennessee, Dr. Burns' family moved to Vilonia, Arkansas, around 1880. After education in the local public schools he attended the University of Arkansas. Dr. Burns was admitted to medical school in 1899 and subsequently licensed to practice medicine under the 1895 Medical Practice Act which empowered County Boards to review a practitioner's competence. There were no statewide licensing examinations in Arkansas until 1903.¹ In 1912 Dr. Burns moved his practice to North Little Rock, Arkansas, where he remained until his death.² His commitment to education was strong and he returned to medical school at Little Rock to receive a formal M.D. degree in 1914. This caused him great financial hardship as he had to make his house calls at night to support his family. His commitment to education was lifelong and extended to the entire community. He served as a member of the School Board of the North Little Rock Special School District (including the then separate municipalities of Levy and Park Hill) for 37 years.³

He was a consistent supporter of quality education, and his voice was instrumental in the placement of the new North Little Rock (now Old Main) High School in what was then largely open space between North Little Rock, Levy and Park Hill. The result was a location central to the growing city. He served as Mayor for two terms (1919-20 and 1925-26). A major accomplishment

of his second term was completion of a water line over the Broadway Bridge which provided the city with a reliable source of purified drinking water.⁴



Dr. William M. Burns, for whom Burns Park in North Little Rock was named. (Courtesy, North Little Rock Parks and Recreation Commission)

Dr. Burns' practice activities were legendary. He delivered over 8,000 babies, made thousands of house calls and was a bulwark during the financially troubled 1930's when many of his patients could not pay. During the influenza epidemic of 1918-19 he walked from house to house searching for those ill with the dreaded disease. He was especially accomplished with children where his gentle and optimistic manner found ready acceptance.⁵

He was an avid sportsman and sports fan, a model family man and an active churchman. He attended all the North Little Rock High School Wildcat football games and sat on the bench with the players. However, Dr. Burns' most important contributions lay outside the fields of medicine or politics and arose from his innate appreciation of the future. He recognized that expansion of the city was inevitable and championed the purchase of 870 acres of surplus government land adjoining the Camp Robinson Military Reservation for a large park. Opposition was raised that the land was too far from the city to be adequately used.

Dr. Burns persisted. In 1949 the city of North Little Rock purchased for \$20,000 the park which now bears his name.⁴ The city has grown up around it just as Dr. Burns predicted and Burns Park today reminds us to his persistence and vision.

At Christmas time in 1953, Dr. Burns died suddenly of an apparent heart attack. He was 75. He was mourned

not only by his family, but by an entire city. Mayor Ross Lawhon, who was Mayor at the time of Dr. Burn's death, ordered City Hall closed at noon the day of the funeral and the flag to fly at half-staff. He also asked all stores and shops to close during the afternoon in honor of Dr. Burns.⁶ He was survived not only by numerous descendants, but by a lasting legacy of the school and parks which he so strongly supported.

References

1. Moyers DM. From quackery to qualification: Arkansas medical and drug legislation, 1880-1909. *Ark Hist Quar* 35:3-26.
2. *Arkansas and Its People: A History*. 1541-1930. Vol. III New York, American Historical Society, 1930, p. 247.
3. *North Little Rock Times*. Editorial "Dr. William Milton Burns" January 1, 1954, n.p.
4. Adams WM. *A History of North Little Rock*. The Unique City. Little Rock, August House, 1986, p.153.
5. William F. *Arkansas of the Years*. Little Rock, G. Allard and Associates, 1951, pp. 71-6.
6. *Arkansas Gazette*. December 30, 1953. Obit.

"From Other Years" is a collection of biographies of well-known Arkansas physicians as well as interesting items from the Archives Division of the University of Arkansas for Medical Sciences library.

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Drugs and Rheumatoid Arthritis

May 24, 12:30 p.m. Presented by Charles Marsh, Pharm. D. Sponsored by AHEC Fort Smith. Medical Library, Sparks Regional Medical Center.

Family Reactions to Acute Illness

May 25, 12:30 p.m. Presented by Russell Williams, ACSW, and Dr. Herbert T. Smith. Sponsored by AHEC Fort Smith. Medical Library, Sparks Regional Medical Center.

Annual Meeting of Arkansas Chapter of American College of Surgeons

June 2 - 4, 8:00 a.m. - 12:00 noon daily. Presented by Nicolas P. Lang, M.D., and Dr. S. E. Landrum. Sponsored by the University of Arkansas College of Medicine. Red Apple Inn, Heber Springs, AR. Fees and Category I credit to be announced.

Attention Deficit Disorders, Learning Disability

June 7, 12:00 noon. Presented by Richard Livingston, M.D., UAMS, Child Psychiatrist. Sponsored by AHEC Fort Smith. Sparks Regional Medical Center, 7th Floor Dining Room.

Instructing Patients on Birth Control

June 8, 1988, 12:30 p.m. Presented by Russell Williams, M.S.W. Sponsored by AHEC Fort Smith. Medical Library, Sparks Regional Medical Center.

Sex and Heart Disease

June 9, 12:30 p.m. Presented by Marion Dunn, Ph.D. Sponsored by AMI National Park Medical Center. Location to be announced.

Indications for MRI

June 10, 6:30 p.m. Presented by Edgardo Angtuaco, M.D., Little Rock. Sponsored by AHEC Southwest. Texarkana Country Club, Forrest Road, Texarkana, AR.

Consulting with Social Workers

June 10, 13:30 p.m. Presented by Russell Williams,

A.C.S.W. Sponsored by AHEC Fort Smith. Medical Library, Sparks Regional Medical Center.

Alumni Weekend and Scientific Session

June 10 - 12, time to be announced. Presented by Janet T. Honeycutt, Executive Director, Arkansas Caduceus Club and Dr. Kent C. Westbrook. Sponsored by the University of Arkansas College of Medicine. Education I Auditorium, University of Arkansas for Medical Sciences. Fee to be announced. Approximately 4.5 Category I credit available.

"Should MD's Always Tell Patients the Truth?"

July 14, 12:30 p.m. Group discussion led by Russell Williams, A.C.S.W. Sponsored by AHEC Fort Smith. Medical Library, Sparks Regional Medical Center.

Pulmonary Embolic Disease; Patient Management and Care

June 16, 12:30 p.m. Presented by Dr. Donald L. Patrick. Sponsored by AHEC Fort Smith. Medical Library, Sparks Regional Medical Center.

Infectious Disease Seminar

June 16, 6:30 p.m. Presented by Dr. Russell Steele. Sponsored by AHEC Southwest. Holiday Inn, I-30 & State Line, Texarkana. Two Category I credit hours.

Beta Lactamase Inhibitor

June 21, 12:30 p.m. Presented by Charles Marsh, Pharm.D. Sponsored by AHEC Fort Smith. Medical Library, Sparks Regional Medical Center.

Continuing Medical Education Luncheon

June 24, 12:30 p.m. Presented by Kenneth Brandt, Rheumatologist, Indiana University. Sponsored by AMI National Park Medical Center. AMI National Park Medical Center.

Antibiotics for the Office-Based Physician

July 26, 12:30 p.m. Presented by Charles Marsh, Pharm. D. Sponsored by AHEC Fort Smith. Medical Library, Sparks Regional Medical Center.

Recurring Education Programs

As organizations accredited for continuing medical education by the Arkansas Medical Society, the organizations named certify that these continuing medical education activities meet the criteria for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

FAYETTEVILLE - VA MEDICAL CENTER

Medical Conference (varying topics), each Friday, 12:15 p.m., Conference Room, Building 1, VAMC

HOT SPRINGS-AMI NATIONAL PARK MEDICAL CENTER

Continuing Medical Education Luncheon for Medical/Dental Staff, varying topics, alternating Fridays, 12:30 p.m., Classrooms, AMI National Park Medical Center

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Alternating Sub-Specialty Conference, third Wednesday, 12:00 noon, Second Floor Classroom
General Pediatrics Seminar, first and third Friday, 12:00 noon, Second Floor Classroom
Genetics Conference, each Wednesday, 12:00 noon, Sturgis Building, Room 457
Infectious Disease Conference, second Wednesday, 12:00 noon, Sturgis Building, Room 121
Metabolic Neurology Conference, first Wednesday, 1:00 p.m., Physicians Lounge, 2nd Floor
Pediatric Grand Rounds, each Tuesday, 8:00 a.m., Sturgis Building, Auditorium
Pediatric Neuropsychiatry Conference, second Wednesday, 1:30 p.m., Second Floor Classroom
Pediatric Neuroscience Conference, first Thursday, 8:00 a.m., Second Floor Classroom
Pediatric Pathology Conference, first Wednesday, 12:00 noon, Second Floor Classroom
Pediatric Pharmacology Conference, fifth Wednesday when applicable, 12:00 noon, Second Floor Classroom
Pediatric Radiology Conference, first and third Thursday, 12:00 noon, Second Floor Classroom
Pediatric Research Conference, third Monday, 12:00 noon, Sturgis Building, Rooms S120-121
Problem Case Conference, second and fourth Friday, 12:00 noon, Second Floor Classroom

LITTLE ROCK-ST. VINCENT INFIRMARY

Cancer Conference, first Wednesday, 12:00 noon, CARTI Auditorium
Cancer Conference, third and fourth Thursday, 12:00 noon, Room S1174K, Lab
General Medicine Journal Club, each Tuesday, 12:00 noon, Medical Affairs Conference Room
Hematology-Oncology Conference, second Thursday, 12:00 noon, Laboratory Library
Interhospital Urology Grand Rounds, first Tuesday, 5:30 p.m., Maumelle Room
Neuropathology Conference, third Tuesday, 5:00 p.m., Room S1174K, Laboratory
Pediatric Conference, first Tuesday, 12:30 p.m., Maumelle Room
Peripheral Vascular Disease Conference, fourth Tuesday, 6:00 p.m., Maumelle Room
Pulmonary Conference, second and fourth Wednesday, 12:00 noon, DeSoto Room

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, third Thursday, 7:00 a.m., Conference Room 1
Grand Rounds Conference, each Wednesday, 12:00 noon, Conference Room 1. Lectures and case presentations
Pathology Conference, third Tuesday, 3:00 p.m., Pathology Library
Pulmonary Conference, each Tuesday, 12:00 noon, Shuffield Auditorium

As an organization accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the University of Arkansas for Medical Sciences certifies the following continuing medical education activities meet the criteria for Category I of the Physician's Recognition Award of the American Medical Association.

UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES - LITTLE ROCK

ACRC/CARTI Tumor Conference, each Wednesday, 12:00 noon, CARTI, Markham & University
ACRC Oncology Forum, fourth Thursday, 4:00 p.m., UAMS Education Building, Room G137
Anesthesia Conference Series, times and dates vary, UAMS Education Building, Room G/110 A&B
Anesthesia Morbidity and Mortality Conference, every second and fourth Tuesday, 6:45 a.m., UAMS Education Building, Room G/110 A&B. Every first, second and third Thursday, 4:00 p.m., Room G/112 A&B.
Child Psychiatry Clinical Case Conference, first Friday, 1:00 p.m., UAMS Child Study Center Conference Room.
Interdisciplinary Gynecologic Cancer Conference, each Friday, 12:30 p.m., UAMS Education Building, Room G106 A&B
Medicine Grand Rounds, each Thursday, 12:15 p.m., UAMS Shorey Auditorium
Medicine Research Conference, each Wednesday, 4:30 p.m. Shorey Building, Room 3506
Neurology Clinical Case Conference, three or four Thursdays per month, 8:00 a.m. Rotates between UAMS (7D33) and LRVAMC (3S) and ACH.
Neuropathology Conference, every Tuesday, 4:00 p.m. Rotates between UAMS (7D33) and LRVAMC (Autopsy Room).
Neuroscience Conference (Basic), second, third, and fourth Monday, 8:00 a.m., UAMS 7D33.
Ob/Gyn Grand Rounds, each Wednesday, 7:30 a.m., UAMS Education Building, Room G/131B
Ophthalmology Problem Case Conference, each Thursday, 4:00 p.m., UAMS AAC Eye Clinic, Room 3/150.
Orthopaedic Basic Science Conference, occasional Tuesdays, 11:00 a.m., UAMS Education Bldg., Room B/135.
Orthopaedic Bibliography Conference, each Tuesday, 8:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Fracture Conference, each Tuesday, 7:30 a.m., UAMS Education Building, Room B/135

Paediatric Grand Rounds, each Tuesday, 10:00 a.m., UAMS Education Building, Room B/135
Psychiatry Grand Rounds/Clinical Case Conference, each Friday, 11:00 a.m., UAMS Shorey Auditorium
St. Vincent Urology Grand Rounds, first Tuesday, 5:30 p.m., St. Vincent Infirmiry, Education Building, Room 159
Surgery Grand Rounds, each Monday, 5:00 p.m., UAMS Education Building, Room G/141A
Surgery Morbidity and Mortality Conference, each Wednesday, 5:00 p.m., UAMS Education Building, Room G/141A
Surgery Review Conference, each Monday, 6:00 p.m., UAMS Education Building, Room G/141A
Urologic Topics (Resident Presentation), once or twice monthly, 5:00 p.m., UAMS
Urology Grand Rounds, twice monthly, 5:00 p.m., VAMC
Urology Morbidity and Mortality Conference, last Wednesday, 5:00 p.m., UAMS
Uro-Radiology Workshop (Urologic Imaging), first Thursday, 5:00 p.m., UAMS
VA Diagnostic Imaging Conference, every Tuesday, Wednesday and Thursday, 8:00 a.m., LRVA Nuclear Medicine Conference Room, Room 1D173
VA Medical Service Teaching Conference, each Thursday, 8:00 a.m., NLRVA, Building 66, Room 38
VA Physical Medicine and Rehab Grand Rounds, fourth Friday, 11:00 a.m., NLRVA Building 89, Conference Room, or Arkansas Rehab Institute
VA Surgery Grand Rounds, each Thursday, 12:45 p.m., VAMC, Room 2D109
VA Surgery Service General Chest Topics (*Combined Surgery/Medicine Lung Conference*), every other Monday, 12:15 p.m., LRVA, Room 2D109.
VA Surgery Service Lung Cancer Conference, every Tuesday, 3:00 p.m., LRVA, Room 2E142.
VA Topics in Rehabilitation Medicine, each Thursday, 7:45 a.m., NLRVA Conference Room, Building 89L
VA Weekly Tumor Conference, each Tuesday, 1:00 p.m., VAMC, Room 2D109

EL DORADO - AHEC

Behavioral Sciences Conference, first and fourth Friday, 12:15 p.m., AHEC - South Arkansas.
Chest Conference, third Wednesday, 12:30 p.m., Warner Brown Hospital
Fracture Conference, third Tuesday, 12:15 p.m., AHEC-South Arkansas
Gynecology-Pathology Conference, second Friday, 12:15 p.m., AHEC-South Arkansas
Internal Medicine Conference, first, second and fourth Wednesday, 12:15 p.m., AHEC-South Arkansas
Pathology Conference, second Tuesday, 12:15 p.m., AHEC-South Arkansas
Pediatric Conference, third Friday, 12:15 p.m., Union Medical Center.
Obstetrics-Gynecology Conference, fourth Thursday, 12:15 p.m., AHEC-South Arkansas
Surgical Conference, first, second and third Monday, 12:15 p.m., AHEC-South Arkansas
Tumor Clinic, fourth Tuesday, 12:15 p.m., AHEC-South Arkansas

FAYETTEVILLE - AHEC NORTHWEST

City Hospital Staff Meeting, second Friday, 12:00 noon, Fayetteville City Hospital
Medicine Teaching Conference, first, third and fifth Thursday, 1:00 p.m., AHEC - NW, 241 W. Spring, Fayetteville
Nephrology Lecture Series, fourth Thursday, 12:30 p.m., AHEC- NW, 241 W. Spring, Fayetteville
Rheumatology Lecture Series, first Tuesday, 12:30 p.m., VA Medical Center
St. Mary's Saturday Morning Problem Conference, each Saturday, 8:30 a.m., St. Mary's Rogers Hospital, Rogers, AR.

FORT SMITH-AHEC

Neurology Conference, second Thursday, 12:30 p.m., Sparks Regional Medical Center, Medical Library

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, first and third Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Annex Building
Arkansas Methodist Hospital CME Conference, last Friday, 7:00 a.m., Arkansas Methodist Hospital, Paragould
Cherokee Village Tumor Conference, third Monday, every four months, 6:00 p.m., Ozark Baptist Memorial Hospital, Cherokee Village.
Chest Conference, fourth Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room
Independence County Medical Society, second Tuesday, 7:30 p.m., White River Medical Center, Batesville
Interesting Case Conference, second and fifth Tuesday, when applicable, 12:00 noon, St. Bernard's Dietary Conference Room
Kennett Tumor Conference, second Tuesday (every other month), 12:00 noon, Twin Rivers Regional Medical Center, Kennett, MO
Methodist Hospital of Jonesboro CME Staff Conference, second Tuesday, 7:30 p.m., Cafeteria, Methodist Hospital of Jonesboro
Monthly Medical Lecture Series, third Tuesday, 7:30 p.m., rotates each month between Walnut Ridge and Pocahontas
Neurological-Neurosurgical Conference, first Monday, 12:00 noon, St. Bernard's Dietary Conference Room
Neuroradiology Conference, second Friday, 12:00 noon, St. Bernard's Dietary Conference Room
Newport Tumor Conference, second Wednesday, 12:00 noon, rotates each month between Harris Clinic and Newport Hospital
Perinatal Conference, second Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Piggott Tumor Conference, third Wednesday, 12:00 noon, Piggott Hospital, every four months.
Poplar Bluff Tumor Conference, third Wednesday, 12:00 noon, Lucy Lee Hospital, Poplar Bluff.
Tumor Conference, fourth Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Wynne Tumor Conference, third Monday, 6:00 p.m., Grecian Steak House, Wynne, every four months.

PINE BLUFF-AHEC

Behavioral Science Conference, each Thursday, 12:30 p.m., Jefferson Regional Medical Center
Chest Conference, second and fourth Friday, 12:30 p.m., Jefferson Regional Medical Center
Family Practice Conference, fourth Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Internal Medicine Conference, second and fourth Wednesday, 12:30 p.m., Jefferson Regional Medical Center
Obstetrics/Gynecology Conference, second Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Pediatric Conference, third Wednesday, 12:30 p.m., Jefferson Regional Medical Center
Radiology Conference, third Tuesday, 12:30 p.m., Jefferson Regional Medical Center

Southeast Arkansas Medical Lecture Series, third Tuesday, 6:30 p.m., Rosswood County Club. Dinner meeting.
Sub-Specialty Conference, first Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Surgery Conference, first Wednesday, 12:30 p.m., Jefferson Regional Medical Center

TEXARKANA-AHEC

Cardiology Conference, alternating Fridays, 11:30 a.m., St. Michael Hospital
Chest Conference, third Wednesday, 12:30 p.m., St. Michael Hospital
Cine Radiology Conference, fourth Friday, 12:00 noon luncheon, Wadley Regional Medical Center
ECHO Cardiology Conference, fourth Friday, 12:00 noon luncheon, Wadley Regional Medical Center
Neuro-Radiology Conference, second and fourth Wednesday, 7:00 a.m. breakfast, Wadley Regional Medical Center
Surgeons and Pathologists Conference, fourth Thursday, 7:00 a.m. breakfast, Wadley Regional Medical Center
Tumor Conference, first Wednesday, 7:00 a.m., St. Michael Hospital

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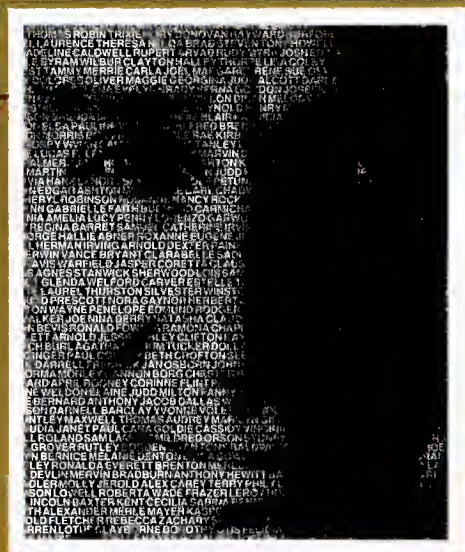
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In a recent survey, 4,120 participating physicians gave us their views¹ on **INDERAL LA** in the treatment of hypertension, angina and migraine.

INDERAL LA is their preferred beta blocker

...of the nearly three out of four physicians responding to the questionnaire, an impressive 97% rated **INDERAL LA** good to excellent for overall performance. Virtually all cited efficacy, tolerability, long-term cardiovascular protection and once-daily convenience as important factors in their choosing to prescribe **INDERAL LA**.

INDERAL LA promotes patient compliance

...Virtually every responding physician rated patient satisfaction with **INDERAL LA** to be as good as, or better than, other beta blockers.

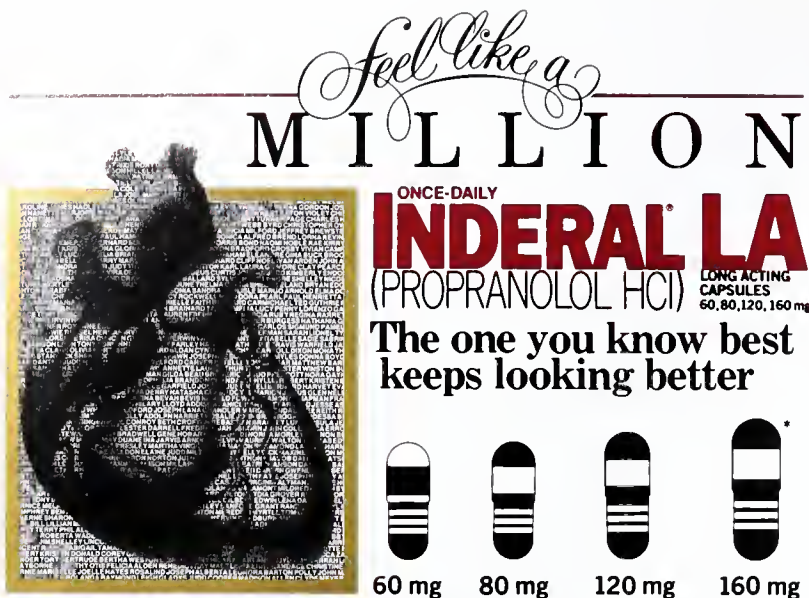
Like conventional **INDERAL** Tablets, **INDERAL LA** should not be used in the presence of congestive heart failure, sinus bradycardia, cardiogenic shock, heart block greater than first degree and bronchial asthma.

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BRIEF SUMMARY (FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)

INDERAL® LA brand of propranolol hydrochloride (Long Acting Capsules)

DESCRIPTION. Inderal LA is formulated to provide a sustained release of propranolol hydrochloride. Inderal LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. Inderal is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by Inderal, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

Inderal LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with Inderal LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of Inderal Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

Inderal LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to Inderal LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, Inderal LA has been therapeutically equivalent to the same mg dose of conventional Inderal as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure, and rate pressure product. Inderal LA can provide effective beta blockade for a 24-hour period.

INDICATIONS AND USAGE. **Hypertension:** Inderal LA is indicated in the management of hypertension; It may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. Inderal LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: Inderal LA is indicated for the long term management of patients with angina pectoris.

Migraine: Inderal LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: Inderal LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. Inderal LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. Inderal is contraindicated in 1) cardiogenic shock; 2) sinus bradycardia and greater than first-degree block; 3) bronchial asthma; 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with Inderal.

WARNINGS. **CARDIAC FAILURE:** Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or Inderal should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of Inderal therapy. Therefore, when discontinuance of Inderal is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If Inderal therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute Inderal therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema) — PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. Inderal should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

Inderal (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing T_4 and reverse T_3 , and decreasing T_3 .

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL: Propranolol should be used with caution in patients with impaired hepatic or renal function. Inderal (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that Inderal may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

CLINICAL LABORATORY TESTS: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if Inderal (propranolol HCl) is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered a calcium-channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardial contractility or atrioventricular conduction. On rare occasions, the concomitant intravenous use of a beta blocker and verapamil has resulted in serious adverse reactions, especially in patients with severe cardiomyopathy, congestive heart failure, or recent myocardial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol.

Ethanol slows the rate of absorption of propranolol.

Phenyltoin, phenobarbital, and rifampin accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased plasma levels of both drugs.

Antipyrine and lidocaine have reduced clearance when used concomitantly with propranolol.

Thyroxine may result in a lower than expected T_3 concentration when used concomitantly with propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY: Pregnancy Category C. Inderal has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. Inderal should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS: Inderal is excreted in human milk. Caution should be exercised when Inderal is administered to a nursing woman.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: Bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System: Light-headedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; vivid dreams; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics. For immediate formulations, fatigue, lethargy, and vivid dreams appear dose related.

Gastrointestinal: Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: Bronchospasm.

Hematologic: Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: Alopecia, LE-like reactions, psoriasisiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. Inderal LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from Inderal Tablets to Inderal LA Capsules, care should be taken to assure that the desired therapeutic effect is maintained. Inderal LA should not be considered a simple mg-for-mg substitute for Inderal. Inderal LA has different kinetics and produces lower blood levels. Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION — Dosage must be individualized. The usual initial dosage is 80 mg Inderal LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS — Dosage must be individualized. Starting with 80 mg Inderal LA once daily, dosage should be gradually increased at three- to seven-day intervals until optimal response is obtained. Although individual patients may respond at any dosage level, the average optimal dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE — Dosage must be individualized. The initial oral dose is 80 mg Inderal LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximal dose, Inderal LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS — 80-160 mg Inderal LA once daily.

PEDIATRIC DOSAGE — At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

Reference:

1. Data on file, Ayerst Laboratories.

D7295/188

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AMA Advisers, Inc. Signs Agreement with Alabama Medical Association

AMA Advisers, Inc., a subsidiary of the American Medical Association and investment advisers producing a range of mutual funds and other financial products and services to physicians, has entered into a licensing agreement with the Medical Association of the State of Alabama, it was announced recently by John Cannon, AMA Advisers president.

Mr. Cannon said that, "This is the third state licensing agreement we have formalized and we are very pleased with the state society relationships we have in place with California, New Jersey and now, Alabama. It's been our goal to market the mutual funds of The AMA Group - ranging from conservative money market funds to aggressive growth - and related financial products and services to physicians and medical professionals nationwide and one way to do this is through the memberships of the state organizations."

The agreement permits AMA advisers to use the society's name, logo and lists to promote the sale of the funds in The AMA Group on the statewide and county levels within Alabama.

In return, AMA advisers will pay the state society a royalty based on the aggregate daily net asset value of the shares of the funds in The AMA Group owned by physicians and their retirement plans located in the state. Such royalties may be shared with county medical societies located in the state. Payments under these agreements can be utilized by the state and county groups to further the many useful medical and education programs which they sponsor and support.

"In effect," Mr. Cannon stated, "we have established a relationship that will be mutually beneficial for the state society, its many members and AMA advisers."

The Medical Association of the State of Alabama has 4,250 members.

The AMA Group of mutual funds consists of: Global Growth, Classic Growth, Growth plus Income, Classic Income, Global Income, Global Short Term and Medical Technology Fund, with two money market fund portfolios of Treasury and Prime.

There are plans to add tax-free and annuity products to those currently offered.

To enhance member interest in the use of these funds, all the traditional and convenient mutual fund services are offered, including free exchanges between

funds, telephone transfers, 800 numbers for service calls and prototype retirement plans

In addition, AMA Advisers offers physicians the following related financial services: Asset Investment Management services, assistance with ERISA compliance, prototype retirement plans, educational seminars for members at convenient locations, and a regular series of informative articles for the state and county publications covering a variety of timely investment and personal finance topics.

Mr. Cannon noted that, "We not only tailor our investment services and products to physicians, but we will actually work with them to help them determine their goals and allocate assets. Additionally, as warranted, we bring to shareholders what we believe to be the best portfolio management talent, such as Templeton Investment Counsel, Inc., and Oppenheimer Capital Corporation."

He indicated that AMA advisers will be exhibiting at the Association's upcoming Annual Meeting at which time information on all investment products and services will be available to attendees. In addition, there will be an opportunity to meet and talk with members of AMA Advisers' staff.

Joint Commission Teleconferences/Publications

The Joint Commission on Accreditation of Healthcare Organizations will present three teleconferences in 1988 as part of a continuing agreement with the Hospital Satellite Network (HSN). Each live two-hour, interactive teleconference offers insights into key areas of the Joint Commission's accreditation requirements. The broadcast schedule is: "Managing Hazardous Materials and Wastes: the Joint Commission Approach," July 7; "Medical Staff Quality Monitoring: Keys to Success," September 1; and "Assuring the Quality of Ambulatory and Managed Health Care Services," October 7.

The teleconferences will each begin at 1:00 p.m., Eastern time, and will be moderated by William Jessee, M.D., vice president for education at the Joint commission.

"Perspectives: The Joint Commission Television Journal" will also continue through 1988 on HSN. This quarterly series of 30-minute broadcasts will feature Dennis O'Leary, M.D., Joint Commission president, and selected guests. Each program will investigate issues of

rest to hospital staff, including changes to Joint Commission standards and survey procedures and updates on the "Agenda for Change."

Most HSN subscribers will receive all programs free of charge. Other healthcare organizations with satellite dishes may purchase access to the programs. Videotapes will also be available following each program.

In another area of Joint Commission work, a set of four publications is now available to assist health care professionals interpret Joint Commission psychiatric and substance abuse standards. The *Consolidated Standards Scoring Guidelines* describe the scoring system used by surveyors during an accreditation survey as well as the intent of the standards. The four volumes are *Patient Management; Quality Assurance and Monitoring Functions; Staff Organization, Qualifications, and Competency; and Therapeutic Environment and Patient Rights*.

"The Joint Commission is often asked about the intent of its standards for freestanding psychiatric and substance abuse programs," said Dr. Jessee. "These publications answer many of those questions by detailing the scoring system used to determine an organization's compliance level."

The four publications sell for \$105 as a set, or \$35 individually. For more information about the publications, to register for the teleconferences or for "Perspectives", call the Joint Commission's customer service unit at (312) 642-6061, extension 650.

AMA Commends HCFA

The AMA has expressed its appreciation to HCFA for the positive steps it has taken in efforts to resolve many of the extensive problems associated with heavy-

handed implementation of "medically unnecessary" refund authority.

In a letter to William L. Roper, M.D., HCFA Administrator, James H. Sammons, M.D., AMA's Executive Vice President, said the Association is "particularly pleased" with the agency's latest corrective action - directing carriers to develop claims. That requirement was conveyed to carriers at mid-month in a HCFA communication providing them with new instructions on how to deal with possible violations of "medically unnecessary" provision.

"While we expect claims development will inject an element of caution behind medical necessity decisions, it is unfortunate that so much damage has been done already to undermine physician/patient relationships," Dr. Sammons stated. "The negative views physicians are expressing over government intrusions are rising to monumental proportions that have been accentuated by the unnecessary services procedures."

Noting that HCFA has indicated that it will re-evaluate the claims development process in nine months, Dr. Sammons questioned whether carriers can afford not to develop claims. He cited the real value of an actual personal review of a claim by a qualified individual and pointed out that such review achieves actual program savings by eliminating a significant percentage of appeals.

Although HCFA has made considerable progress in addressing shortcomings evident in "unnecessary services" enforcement, problems are still rampant, Dr. Sammons stressed.

He said AMA representatives would like to meet with Dr. Roper at his earliest convenience to discuss the undertaking of a joint educational program for both physicians and carriers. Its thrust would be to explain carrier screens and their appropriate use.

NEW MEMBERS

ASHLEY COUNTY MEDICAL SOCIETY

Rankin, James D., General Practice, Hamburg. Born July 22, 1935, Elaine, AR. Pre-medical education, Hendrix College, B.A., 1957. Medical education, University of Arkansas for Medical Sciences, 1961. Internship/Residency, University of Arkansas for Medical Sciences, University Hospital. Military, United States Air Force. Practice experience, Hamburg, 23 years.

GARLAND COUNTY MEDICAL SOCIETY

Atherton, Lee G., Obstetrics and Gynecology, Hot Springs. Born August 31, 1923, Peoria, IL. Pre-medical

education, University of Illinois, Champaign; B.S., 1943. Medical education, University of Illinois, Chicago, 1946. Internship, St. Francis Hospital, Peoria, IL. Residency, Women's Hospital and Harper Hospital, Detroit, MI. Military, United States Army Medical Corps. Practice experience, Peoria, IL; 34 years. Teaching appointments, University of Illinois School of Medicine. Board certified, Obstetrics and Gynecology. Member, ACS, ICS.

JEFFERSON COUNTY MEDICAL SOCIETY

Frigon, Gary F., Internal Medicine, Pine Bluff. Born April 26, 1953, Detroit, MI. Pre-medical education,

Wayne State University, B.A., 1975; M.S., 1977. Medical education, University of Arkansas for Medical Sciences, 1984. Internship/Residency, UAMS. Board certified. Member, American College of Physicians.

JOHNSON COUNTY MEDICAL SOCIETY

Goodman, James D., General Surgery, Clarksville. Born March 14, 1947, Malvern, AR. Pre-medical education, University of Arkansas, B.S., 1970. Medical education, University of Arkansas for Medical Sciences, 1981. Residency, UAMS. Board certified, Surgery. Member, ACS, AMA.

POPE COUNTY MEDICAL SOCIETY

Patterson, William D., Cardiovascular Disease, Russellville. Born December 21, 1944, Maryville, TN. Pre-medical education, Wooster College, B.S., 1967. Medical education, Vanderbilt, Nashville, TN, 1974. Internship/Residency, Vanderbilt University. Practice experience, Huntsville, AL, 8 years. Teaching appointments, University of Alabama, Huntsville. Board certified, Internal Medicine and Cardiovascular Disease. Member, American College of Cardiology, American College of Physicians, American Heart Association.

PULASKI COUNTY MEDICAL SOCIETY

Barger, Denver L., Family Practice, Little Rock. Born November 26, 1951, Searcy, AR. Pre-medical education, University of Central Arkansas, Conway, B.S., 1977. Medical education, University of Arkansas for Medical Sciences, 1984. Residency, UAMS. Board eligible.

Birkett, Ian M., Pathology, Little Rock. Born May 12, 1952, San Diego, CA. Pre-medical education, Pomona University, Claremont, CA, B.A., 1974. Medical education, Vanderbilt University, Nashville, TN, 1978. Internship/Residency, Parkland Memorial Hospital, Dallas, TX. Board certified, Pathology.

Holloway, James D., Cardiology, Little Rock. Born November 5, 1958, Springfield, MO. Pre-medical education, University of Missouri, Kansas City, B.A., 1982. Medical education, University of Missouri, Kansas City, 1982. Internship/Residency, University of South Florida, Tampa. Board certified, Internal Medicine.

Kyle, Joan E., Pediatrics, Little Rock. Born June 5, 1957, Little Rock. Pre-medical education, University of Arkansas at Little Rock, B.S., 1979. Medical education,

University of Arkansas for Medical Sciences, 1983. Internship/Residency, LeBonheur Children's Hospital, Memphis. Board eligible.

SEBASTIAN COUNTY MEDICAL SOCIETY

Mauroner, Richard F., Psychiatry, Fort Smith. Born June 26, 1956, Durham, NC. Pre-medical education, University of North Carolina, Chapel Hill, 1978. Medical education, Louisiana State University, Shreveport, 1983. Internship/residency, University of Texas Health Sciences Center, San Antonio. Member, Texas Society of Psychiatric Physicians; APA

TRI-COUNTY MEDICAL SOCIETY

Relyea, William V., General Surgery and Gynecology, Hardy. Born August 9, 1923, New York City, NY. Pre-medical education, Oswego State University, Oswego, NY; 1943 and City Collge of New York, 1945. Medical education, University of Buffalo Medical School, NY, 1948. Internship, Millard Fillmore Hospital, Buffalo. Residency, Upstate Medical Center, Saracuse, NY. Military, United State Air Force. Practice experience, United State Air Force, 40 years. Teaching appointments, United State Air Force. Board certified, General Surgery.

WASHINGTON COUNTY MEDICAL SOCIETY

McGowan, William J., Family Practice, Springdale. Born January 26, 1955, Dayton, OH. Pre-medical education, University of Arkansas at Little Rock, 1980. Medical education, University of Arkansas for Medical Sciences, 1984. Internship/residency, UAMS (AHEC - Northwest). Board certified, Family Practice.

Knox, David L., Neurological Surgery, Fayetteville. Born September 20, 1955, Brownfield, TX. Pre-medical education, University of Texas, B.S., 1977. Medical education, University of Texas Medical Branch, Galveston, 1981. Internship/residency, University of Iowa. Board eligible.

Gray III, Dalton L., Family Practice, Fayetteville. Born December 13, 1956, Hazen, AR. Pre-medical education, Hendrix College, Conway, AR, B.A., 1979. Medical education, University of Arkansas for Medical Sciences, 1984. Residency, UAMS, AHEC - Northwest. Member, AMA, AAFP.

DR. WILLIAM TEX STONE

William Tex Stone, M.D., aged 62, a Rogers family practitioner, died Wednesday, April 6.

Dr. Stone practiced in Purcell, OK, for 20 years and in Frederick, OK for five years before moving to Rogers in 1978. He was a member of the Benton County Medical Society and the Arkansas Medical Society. Dr. Stone was a member of the Alpha Omega Alpha Honor Medical Society and American Board of Family Practice.

Survivors include his wife, Doris M. Stone; a son, Robert Tex Stone of Dallas, Texas; three daughters, Pamela Sue Carter of Tulsa, Oklahoma, Sherry Lynn Hendrix of Washington, Oklahoma, and Stacy Leigh Stone of Rogers; a brother, Calvin R. E. Stone of Richardson, Texas; two sisters, Willard Ward of San Jose, California, and Charlotte Anderson of Baton Rouge, Louisiana; and seven grandchildren.

DR. M. HAYMOND HARRIS

Dr. M. Haymond Harris, a retired Newport surgeon, died April 6, 1988. He was 76.

Dr. Harris founded the original Harris Hospital and Clinic in Newport in 1947 with the help of his father, the late Dr. M. L. Harris.

Dr. Harris was a member of U. S. Army Medical Corps from 1942 until 1946, where he served as chief of vascular surgery at Ashford General Hospital in West Virginia. He was a fellow of the American College of Surgeons, a member of the Southern Surgeons Club and a member of Southwest Surgical Congress. Dr. Harris

was also a member of the Fifty Year Club of the Arkansas Medical Society and the Southern Medical Association.

Dr. Harris was chairman of the Official Board of the First United Methodist Church of Newport and was a former member of the Newport Rotary Club.

Dr. Harris is survived by his wife, Kathryn Sherrill Harris, of the home; a daughter, Kathryn Harris Cook of Charlotte, NC; two brothers, Marcus Harris of Tuckerman and Kennedy Harris of Greensboro, NC; and three grandchildren.

DR. ROBERT M. TIRMAN

Dr. Robert M. Tirman, aged 71, of Jacksonville died April 25, 1988. He was an associate professor emeritus in radiology at the University of Arkansas for Medical Sciences.

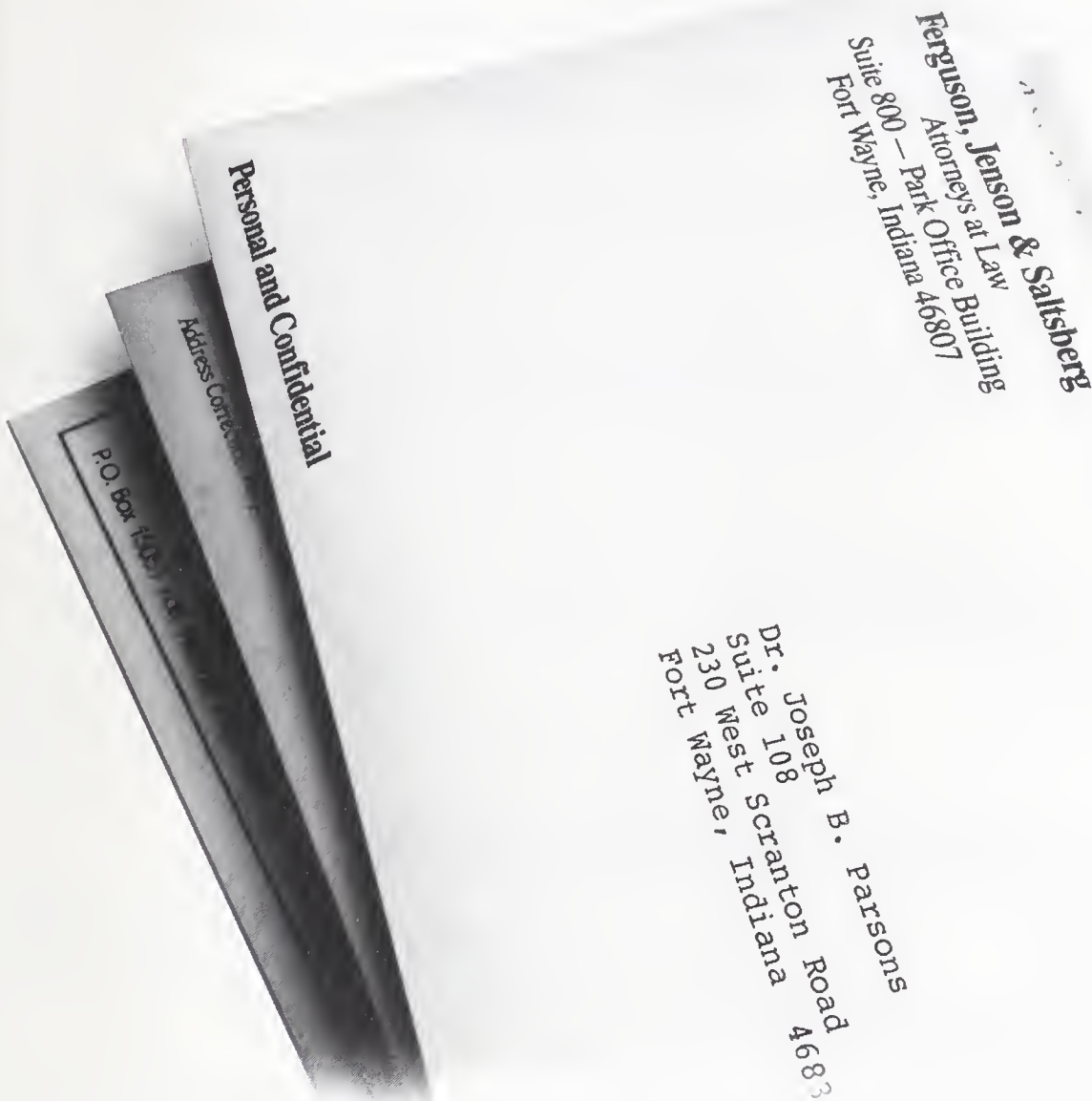
Dr. Tirman had been an associate professor of otolaryngology and radiology at UAMS. He had also been medical director of its School of Radiologic Technology.

Dr. Tirman was an Army veteran and retired from the Air Force as a colonel in 1969. He was past president of the state and Little Rock chapters of the Air Force Association and a member of the Little Rock Air Force Base Community Council as well as a member of the

Jacksonville Chamber of Commerce. He was a member of the American Medical Association and the Arkansas Medical Society. Dr. Tirman was also a member of the American Society of Head and Neck Radiology and the American College of Radiology.

Survivors are his wife, Odette Louisa Tirman; four sons, Claude Robert Tirman of Manhattan Beach, CA; David A. Tirman of Irvine, CA; Dr. Phillip Tirman of Galveston, TX; and Geoffrey Tirman of Jacksonville; two daughters, Michelle Reynolds and Christine Osborne of Little Rock; a brother, Dr. Wallace Tirman of Plymouth, IN; and five grandchildren.

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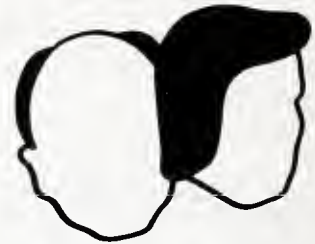
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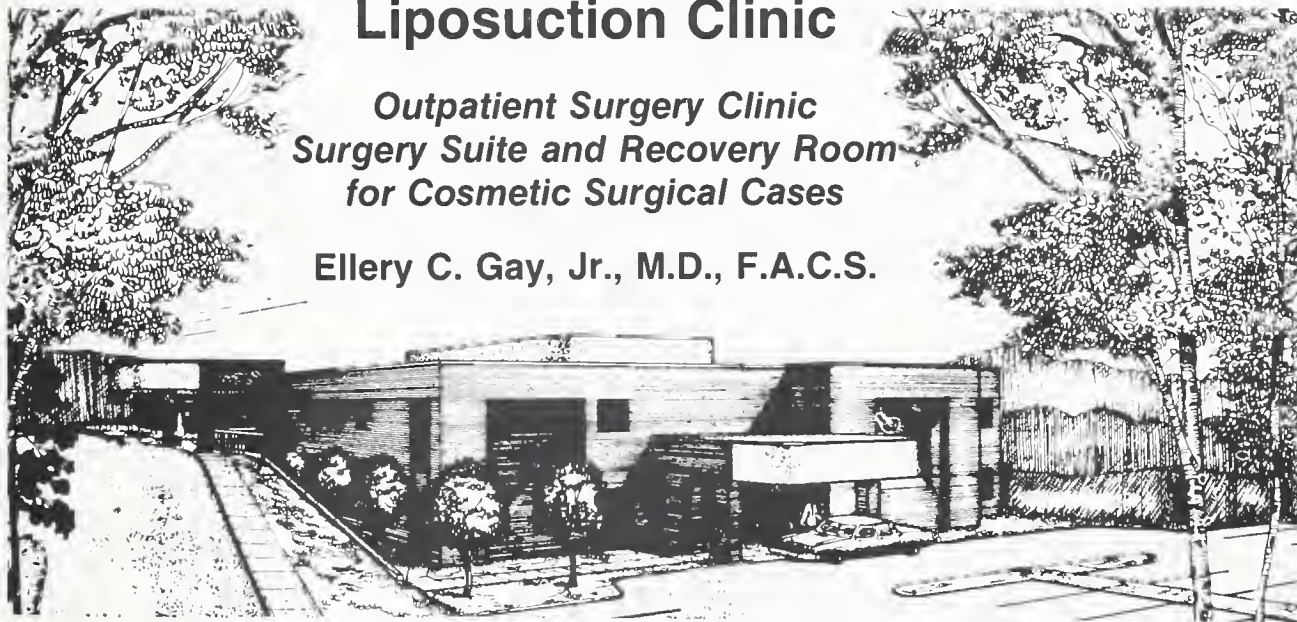
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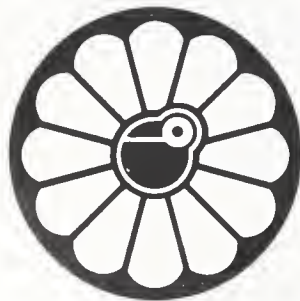
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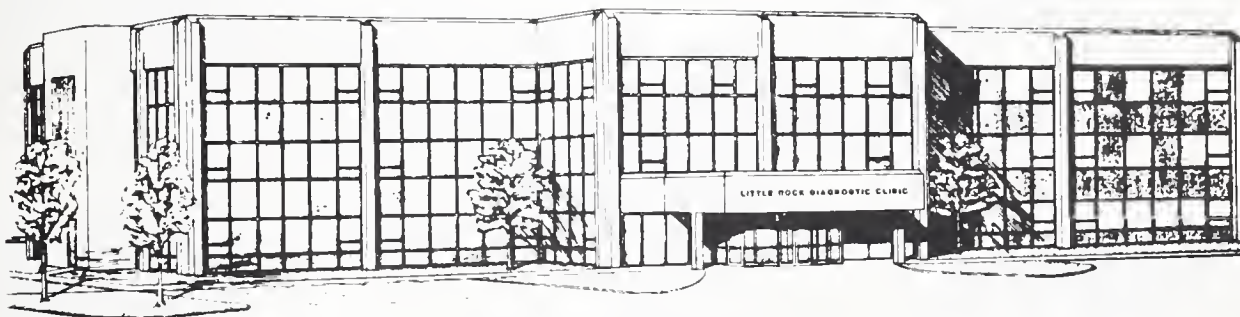
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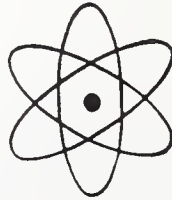
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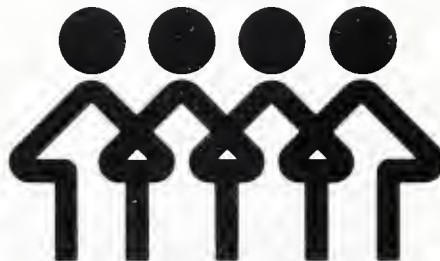
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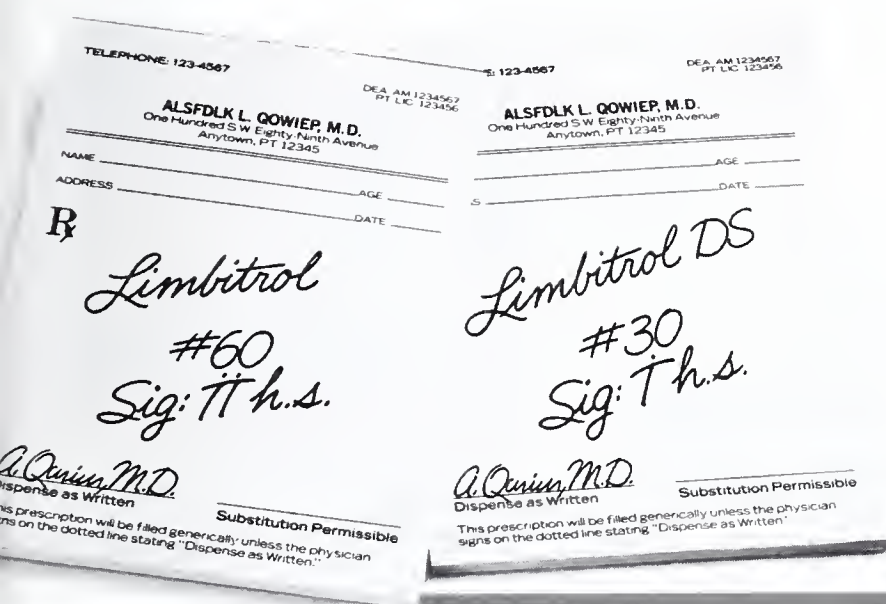
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References: 1. Data on file, Hoffmann-La Roche Inc., Nutley, NJ. 2. Feighner VP, et al: *Psychopharmacology* 61:217-225, Mar 22, 1979.

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Tranquilizer—Antidepressant
Before prescribing, please consult complete product information, a summary of which follows:

Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants; concomitant use with MAOIs or within 14 days of monoamine oxidase inhibitors (then initiate cautiously, gradually increasing dosage until optimal response is achieved); during acute recovery phase following myocardial infarction.

Warnings: Use with caution in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur when used with anticholinergics. Closely supervise cardiovascular patients. Arrhythmias, sinus tachycardia, prolongation of conduction time, myocardial infarction and stroke reported with tricyclic antidepressants, especially in high doses. Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving).

Usage in Pregnancy: Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.

Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).

Precautions: Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.

Adverse Reactions: Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.

Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: **Cardiovascular:** Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. **Psychiatric:** Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. **Neurologic:** Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. **Anticholinergic:** Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. **Allergic:** Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. **Hematologic:** Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. **Gastrointestinal:** Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. **Endocrine:** Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. **Other:** Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Drug Abuse and Dependence: Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.

Overdosage: Immediately hospitalize patient. Treat symptomatically and supportively. I.V. administration of 1 to 3 mg physostigmine salicylate may reverse symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

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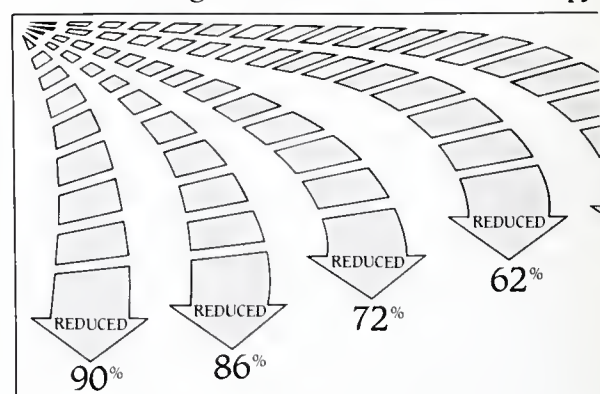
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